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THE HEALTH MAGAZINE

HYGEIA

EPARING FOR BABY
(See page 403)

Invisible Spectacles
Diabetic Gangrene

MAY 1939

AMERICAN MEDICAL ASSOCIATION PUBLICATION

THE WORLD'S HEAVIEST 8-POUND BUNDLE

BACK AT THE HOSPITAL, with doctors and nurses as ever-present guardians, parenthood seemed a carefree and joyous state to the parents of this new baby.

But now, they find themselves in *sole* charge of the fragile life within this tiny bundle—and the responsibility is weighing heavily upon them.

It has come to them suddenly that the business of being masters of a baby's destiny is a complex and serious one, something for which they are none too well prepared.

Fortunately for them, they don't have to face it alone. For the doctor stands ready to give them the benefit of his training and experience in meeting those troublesome day-to-day problems to which new parents are heir.

The doctor understands new babies—and new parents, too. Under his direction, burdens and problems that seemed mountains melt into molehills. And the help and advice he gives is based on sound medical knowledge.

Particularly during the baby's first year of life, he should be inspected by the doctor at regular intervals. These regular visits will enable your doctor to check the baby's diet and schedule, his habits of eating, sleeping and elimination. They will permit the physician to start an immunization program which will close the nursery door to such diseases as smallpox and diphtheria.

And—vitally important in the years to come—they will make it possible for him to detect forerunners of future trouble, and take corrective steps at once.

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SEE YOUR DOCTOR

BABIES SUPERVISED BY PHYSICIANS ARE BETTER BABIES

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MAY 1939 Vol. 17 No. 5

HYGEIA

THE HEALTH MAGAZINE

Published and copyrighted, 1939, by the American Medical Association. Edited by Morris Fishbein, M.D.

WHO'S WHO IN HYGEIA

RICHARD KOVACS, M.D., New York City, was the United States delegate to the Fifth International Congress of Physical Medicine in London in 1936. At present he is a clinical professor and director of physical therapy at the New York Polyclinic Medical School and Hospital. Dr. Kovacs has written three books—"Electrotherapy and Light Therapy," "Nature, M.D." and "Physical Therapy for Nurses"—and too many articles to tell of.

WILLIAM F. MENGERT, M.D., has published a number of articles, one of them winning a prize award from the Central Association of Obstetricians and Gynecologists for the best research work done by any member during that year. Dr. Mengert is on the faculty of the College of Medicine, State University of Iowa, teaching obstetrics and gynecology. He served in the U. S. Navy during 1918 and is 40 years old.

LEMUEL C. McGEE, M.D., Elkins, W. Va., was born in New Boston, Tex.; he studied at the University of Chicago, where he received his degree of Doctor of Philosophy in biochemistry and physiology in 1927, and at Rush College of Medicine, where he received his M.D. degree in 1929. Dr. McGee is also the author of "Cathartic Conscious America," which appeared in HYGEIA in August 1937.

THIS MONTH

COVER ..... Black Box, N. Y.

HYGEIA WINS A LIBEL SUIT—An Editorial 391

CONTACT LENSES ..... Wilson Chamberlain 392

PERSONALITY WARDROBE—A Poem ..... Harriet Rukenbrod 395

PARENTS, INCORPORATED ..... Dorothy E. Bradbury and Eleanor Saltzman 396

ARTIFICIAL FEVER ..... Richard Kovacs, M.D. 400

PREPARING FOR BABY ..... William F. Mengert, M.D. 403

COST OF MATERNITY CARE ..... Sibyl Winser Johnston 407

ART IN MEDICINE ..... Ellen P. O'Bryan 408

"THE FAT OF THE LAND" ..... Lemuel C. McGee, M.D. 411

DIABETIC GANGRENE ..... Saul S. Samuels, M.D. 414

THE DOCTOR ROUND THE CORNER ..... Regina J. Woody 417

AN INFANT INDUSTRY GROWS UP ..... Elizabeth Dobson 421

MEDICAL EDUCATION 424

JUDITH STARTS SOMETHING ..... Philip Jared 426

PROTECTING THE HEALTH OF THE CHILD ..... Elizabeth Cotton 430

MYSTERIOUS EPIDEMICS IN HISTORY: III ..... Claude Lillingston, M.D. 433

GRAY ANGELS ..... Alwyn W. Knight 436

CONFIDENCE—A Poem ..... Grace Maddox Miller 438

LOOKING FORWARD TO JUNE 439

WHITE ESKIMO CHIEF: II ..... Clark M. Garber 440

TEMPER TANTRUMS ..... William I. Fishbein, M.D. 449

FOODS AND NUTRITION

- Dessert Products 452
- Paradise Fruit ..... Harriet Morgan Fyler, Ph.D. 454

HEALTHGRAMS 457

QUESTIONS AND ANSWERS 458

BOOKS ON HEALTH 462

SCHOOL AND HEALTH

- Keeping the Curiosity of Children Alive—An Editorial 469
- Missouri's Dental Health Program ..... Thelma Suggett 470
- Teaching Hygiene to High School Boys ..... Charles J. Schneider 471
- Food Experiments for the Classroom: IX ..... Ethel Austin Martin 472
- Little Journeys Among High Schools: IX ..... Jean V. Latimer 474

TO AMERICA'S SCHOOLS—YOUR HEALTH! 476

MEDICAL NEWS OF THE MONTH 480

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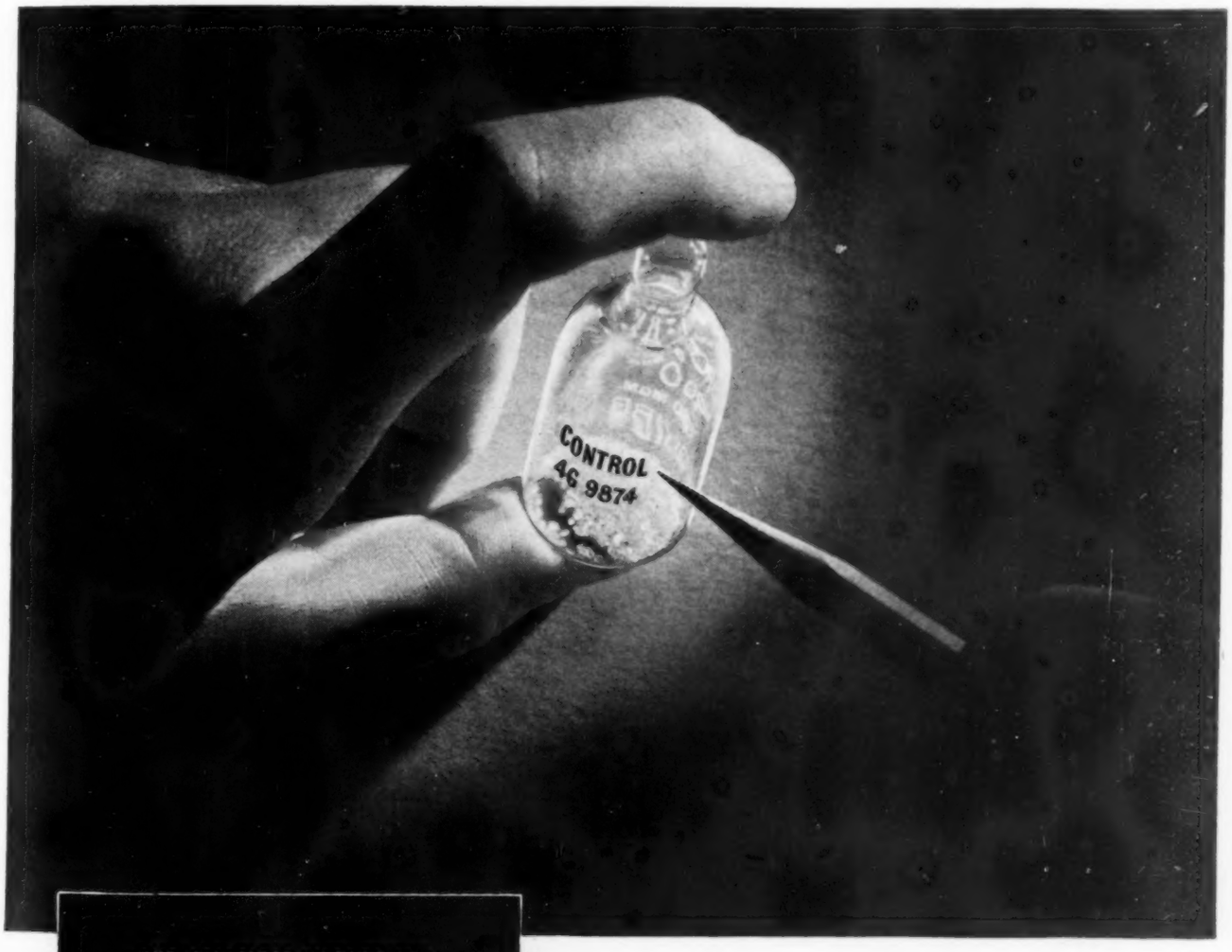

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LETTERS FROM *Readers*

Plagiarism

To the Editor:

We note that there recently appeared in HYGEIA [January 1939] an article entitled "Know Thyself" by E. E. Veit, which appears to be largely plagiarized from one of our publications, "Discovering Ourselves," a view of the human mind and how it works. Drs. Edward A. Strecker and Kenneth E. Appel of Philadelphia are the authors of this book, which was published by us in April 1931. As an indication of the extent of the plagiarization—though we cannot guarantee to have discovered all such instances—we can refer you to forty different pages in the book from which the article came.

Naturally we would appreciate your prompt attention to this matter.

J. N. MYERS
The Macmillan Company
New York City.

It is manifestly impossible for an editor to be so familiar with all books that are published as to be immediately cognizant that one author has victimized another by using extensive quotations. We have written the author requesting the return of the money she received in payment of the article. This we shall turn over to the authors of the book "Discovering Ourselves."—Ed.

▲

Victor Hugo

To the Editor:

In HYGEIA for March in the article on "Famous Premature Babies" by Rose A. Laughlin on page 206, referring to Victor Hugo, she says he was "in exile in Brussels" for 18 of his 83 years of life. That is not correct.

Victor Hugo fled to the Island of Guernsey, one of the "channel islands" belonging to England, when Napoleon III became Emperor of France in 1851; and when the Empire fell in 1870, he returned to France.

I was in Guernsey myself in 1868, and Victor Hugo was living there then.

REV. GEORGE W. STRUTT
Salamanca, N. Y.

The author replies, "Hugo escaped to Brussels Dec. 14, 1851, whence he left for Jersey August 1852 and to Guernsey in 1855; here he remained until 1870."

▲

"Safety" Pins

To the Editor:

I do not think your face need be red because of the picture on page 28, January 1939 issue. The safety pin in the mother's mouth tends to emphasize the point the author is making. A mother thoughtless or uninformed enough to wrap her child in that manner could hardly be expected to remember to keep safety pins out of her mouth.

G. B. MEAHL
Akron, N. Y.

▲

Early Memory

To the Editor:

In the January HYGEIA there was a question by A. K. as to the possibility of an adult remembering what happened when he was 2 or 3 years old.

The answer given no doubt is correct in the majority of cases but is too sweeping.

It probably depends on the intelligence of the child, not only the amount but the kind of intelligence and on circumstances.

My memory begins with a very clear though narrow recollection which could only have happened when I was between 22 and 23 months old. My next was when I was 2: 4 or 2: 6 years old. In both of these cases surprise was present.

I have ten recollections of my 2 year old and twenty-one of my 3 year old periods. These thirty-one episodes are clearcut, and there are other vaguer ones and remembrances of my general surroundings. No one told me of these things for no one knew in most cases; generally it was what I thought about what happened that seems to have set the recollections.

I believe that one reason why people do not remember better is because they so often live in one place and the days run together. I lived in seven different places when 2 years old and can therefore date surely some of my memories by their backgrounds.

Though I learned where I lived when 2 years old from my mother, my own memory of my life begins when I was 3 and a few weeks.

When I was about 3¾ years old I tried to remember what it was like to be carried as babies were carried, and I could not remember.

Surprise is not necessary.

A. H. BROWN
Rochester, N. Y.

One of the confusing factors in identifying memories from early youth is to distinguish between actual memory of the event itself and memories of family discussions of the same, which may have occurred in the intervening years. Individuals are sometimes deceived into believing that they remember something which occurred when they were present, but of which they have a vivid picture based on frequent discussion of the event in conversations in the home.

▲

More About Birth Control

To the Editor:

Your editorial "HYGEIA and Birth Control," appearing in the March 1939 issue, page 199, has just been brought to our attention. You say that several hundred letters were sent HYGEIA recently, urging "publication in this periodical of articles

discussing birth control from various points of view," and that the letters were stimulated by propaganda emanating from the Birth Control Clinical Research Bureau. The letter which you reproduced on the page opposite your editorial was one of a series developed for use by thousands of supporters of birth control. These individuals believe strongly in birth control as a part of preventive medicine and health measure and wish to see appropriate and effective action taken. Publication is essential in any controversial movement. The supporters of birth control feel that their cause is for the public good and are engaged in an educational campaign which presents their point of view to the public. The bureau's "propaganda" letter did not suggest that the writer ask HYGEIA for "articles discussing birth control from various points of view," but for "an article on the general subject." If any one wrote, therefore, requesting an article on contraceptive methods, he or she was not following the bureau's suggestions.

In the second paragraph of your editorial you state that "HYGEIA was established to educate the public on health," that it is widely used by students in grade schools, high schools and colleges; that it is supplied in one state to all elementary schools, and that "it is not considered that discussions of devices for birth control are suitably directed to such an audience." We are in entire agreement with this last statement. The Birth Control Clinical Research Bureau is under medical direction. Its staff physicians and Advisory Board are as strongly opposed as you are to the indiscriminate distribution of contraceptive information to the public in lay journals and limit distribution of its medical publication, the *Journal of Contraception,* to physicians and scientists. This attitude is shared by the Birth Control Federation of America with which the educational activities of the Birth Control Clinical Research Bureau have recently been merged.

The third paragraph of your editorial states that one function of the American Medical Association's Committee on Contraceptives is "to arrange for publication in *The Journal* of the American Medical Association of articles which discuss 'disastrous results of false reliance on products for which misleading claims are made to the public,'" this quotation being taken from the bureau's letter in HYGEIA. Your editorial continues that these articles, to be published in *The Journal,* will then "be available for reproduction in any periodical addressed to that part of the general public interested in birth control." Only one authorized report, emanating from the Association's Committee, has been published in *The Journal* of the American Medical Association to date. It has a misleading title: "Report on the Use of Roentgen Rays for Contraception" (J. A. M. A., Nov. 5, 1938, p. 1767) for it is not concerned with contraception but with the induction of abortion. It is, in addition, entirely unsuitable for reproduction in a lay periodical.

Furthermore, it is not likely that material published in *The Journal* of the American Medical Association would be of such a nontechnical character as to be of value even for that part of the lay public interested in the medical implications of birth control. We assume that HYGEIA was established to educate the public on health as a supplement to *The Journal,* which serves the medical profession. The weight of medical opinion is that where conditions exist which threaten the health of the mother, pregnancy is contraindicated. There is little disagreement on certain of these medical indications—as chronic hypertension, pulmonary tuberculosis, cardiac or renal diseases of certain types, mental instability and repeated childbirths at short intervals. All studies show the heavy incidence of maternal and infant mortality when these contraindications are disregarded. Contraception, in the presence of such indications, is a health measure. The readers of HYGEIA, even if they are adolescents, might learn, to advantage, that child spacing and planned parenthood are of the utmost importance in conserving the health of the nation and the lives of its mothers and babies.

RICHARD N. PIERSON, M.D.,
Chairman of the Board—
Chairman Medical Department.
Birth Control Federation of America, Inc.
New York City.

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Reprinted for expectant mothers from the series in "Hygeia"

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Is evidence that GOOD LUCK Margarine and the advertising claims made for it have been accepted by the Council on Foods of the American Medical Association.

JOHN F. JELKE CO., CHICAGO

Sometimes, when I think I'm a thousand years old,
And the city seems just like a jail,
I long to head out for the West again
And lean on that old top rail.
You never grow old when you're under that sky—
You never get puffy or pale—
You're wiry and tanned; you feel like a boy
When you lean on that old top rail.

—PHELPS JOHNSTON

Hygeia Wins a Libel Suit

IN FEBRUARY 1938 HYGEIA published the second half of a series of articles, entitled, "Modern Medical Charlatans," in which was included a description of the life and career of John R. Brinkley, then living and working in Del Rio, Tex., but more recently conducting his activities at Little Rock, Ark. Apparently the article in HYGEIA was not especially pleasing to John R. Brinkley; indeed that is expressing it mildly. His response was to file suit against the editor of HYGEIA demanding $250,000 in damages and alleging that the statements in the article were libelous.

The libel suit came to trial in Del Rio on March 22, 1939. A jury consisting largely of residents of the vicinity of Del Rio was impaneled and evidence began to be offered by the plaintiff on the afternoon of the same day. In the course of the trial the plaintiff, Dr. John R. Brinkley, offered in evidence not only his own testimony but that of his associates, also a number of character witnesses. It was the decision of the court that patients would not be allowed to testify as to the results of any procedures performed on them. For the defendant there appeared three experts specializing in diseases of the genito-urinary organs and a chemist of the American Medical Association. Furthermore, there were read into the record several depositions containing evidence prepared for a previous suit of a similar character which was withdrawn. Among the exhibits offered were most of the pamphlets circulated by the plaintiff and a book concerned with his biography, written by Clement Wood and entitled "The Story of a Man." Following the completion of the evidence, which required four full days, attorneys for both sides presented the case to the jury, and the instructions were given to the jury by Judge R. J. McMillan. After a consideration of several hours, the jury returned its verdict in favor of the editor of HYGEIA.

John R. Brinkley is active on the radio night after night from station XERA in Villa Acuna across the Rio Grande from Del Rio, Tex. On the witness stand he testified that the station develops 1,000,000 watts toward the United States and about 50,000 toward Mexico. It was brought out that Brinkley claimed an income of $1,100,000 in 1937 and that it fell to $810,000 in 1938. It was also brought out that the broadcasts, except for week ends, are made from records. Brinkley flies from Little Rock in his own two-motored plane to broadcast each week end. Many other interesting observations having to do with his methods of practice were described on the witness stand both by Brinkley and his associates.

HYGEIA expects, in a future issue, to make available a more extensive report of this case and also of the instructions of Judge McMillan to the jury. The record of this case is a commentary on the status of medical practice in some American communities.

THIS WOMAN NEEDED TO WEAR GLASSES, BUT HER VOCATION DID NOT PERMIT THEIR USE.

SO SHE UNDERTOOK TO GET A PAIR OF CONTACT LENSES. HER FIRST EXAMINATION IS SIMILAR TO THAT FOR ORDINARY GLASSES.

CONTACT LENSES

The Invisible Spectacles

By WILSON CHAMBERLAIN

SIX THOUSAND Americans are said to be wearing "invisible spectacles." The starry eyes of a dozen favorite movie stars—of both sexes—are triumphs of the laboratory. Numerous ship's officers, singers, lecturers, fashion models, at least one known major league ball player and one truck driver look normal as they go about their daily affairs, when in reality they are peering through lenses.

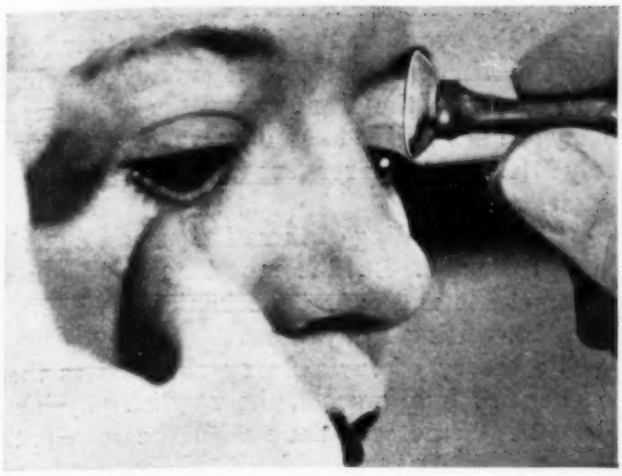
They wear, attached by suction to the eyeball itself, a paper-thin shell of glass or bakelite, its center a lens made to optical prescription, just as the ordinary spectacle lenses are ground, but on a tinier, almost a microscopic, scale. These "contact lenses" of course move with the eye. A foot away they are invisible.

Their advantages to actors, actresses and others who must look their best before the public are obvious. Probably most users are thus motivated. Persons afflicted with certain eye diseases, notably keratoconus, in which the cornea becomes softened and deformed, protruding conelike, find that contact lenses are the best aid to vision they can get.

Among other reasons which account for the growing popularity of the contact lenses among selected users are the facts that, unlike spectacles, they cannot fall or be knocked off; they do not get misty or become streaky in rain or snow. Wearers of contact lenses sometimes get jobs that would be refused to wearers of eyeglasses. Professional athletes of course find spectacles a great handicap and are turning to contact lenses. Ship's officers and yachtsmen have found that contact lenses obviate trouble with spray. In certain industries, special contact lenses serve more conveniently than heavy goggles to protect eyes against chemical fumes or intense light. In Germany, where the contact lenses originated, 50,000 persons wear them for any one of these many reasons.

But there are disadvantages which make it unlikely that contact lenses will ever abolish or even noticeably diminish the use of conventional spectacles. Unless you have a strong reason for needing them—unless it is a better reason than mere vanity—your eye doctor is likely to discourage you from adopting them. In the first place, they are expensive. They cost from $75 to $100 a pair, plus the specialist's fee for prescribing and fitting. This cost may come down but will always exceed the price of spectacles. Furthermore, many persons find them uncomfortable. They feel an actual sense of "bother," of "something in the eye." The "nervous" person, likely to complain of the fit of gloves, shoes or false teeth, never gets used to them. Persons with tight eyelids or hay fever cannot wear them at all.

While one patient wore contact glasses sixteen hours a day for nearly five years with excellent tolerance and without any bad effects, the average tolerance seems to be about eight hours. Most people who wear contact lenses remove the glasses every four hours or so for a rest period.



SHE RETURNS LATER TO TRY ON HER NEW LENSES. SOMETIMES MANY FITTINGS AND CHANGES ARE REQUIRED.

THE CONTACT GLASSES ARE NOW IN PLACE FOR HER FIRST EXAMINATION WITH THEM ON.

A questionnaire among eye specialists in the United States showed that 80 per cent of persons who wear contact lenses to correct unusual eye conditions are perfectly satisfied. This was based on case histories in their own practice. But of those who wear them for occupational or "cosmetic" reasons, one-fourth to one-half confess they are not perfectly happy with them, though obviously they prefer them to spectacles in their circumstances of life.

Many wearers never get over worrying about breakage. As a matter of fact, contact lenses really are just about as safe as glasses. In thousands of fittings, the sole discoverable case of breakage did not damage the eye. The glass of a contact lens is tough, and its firm contact

NOW SHE MUST LEARN TO GET THEM ON AND OFF HERSELF.

PERFECTLY DELIGHTED, SHE CAN NOW SEE CLEARLY AND STILL CONTINUE WITH HER CHOSEN CAREER, FOR THE NEW GLASSES CAN SCARCELY BE DETECTED A FOOT AWAY!

with the elastic, adhesively damp eyeball gives it little chance to shatter. In one famous case, a motor accident gave a wearer of contact lenses a savage cut across the forehead, eyelid and cheek. A naked eye or a bespectacled eye would have been badly slashed. The contact lens took the blow undamaged and saved the eye. Even outside the eye, these tiny gadgets are seldom broken. Careless handling in cleaning may snap them. But unless they hit at just the right angle, they will bounce harmlessly when dropped on a stone floor.

Great care is taken to minimize discomfort. The surfaces of contact lenses are polished to microscopic smoothness; the edges are rounded. Contact with the eyeball and lids is lubricated by a special liquid placed in the hollow of the lens. The liquid is synthetically produced tears. The patient's own tears are chemically analyzed to ascertain the degree of salinity and then accurately matched in a prescribed solution.

Getting a contact lens on and off the eye is a neat trick. The wearer first fills the inverted shell-like lens with the salt solution. The shell is then held at the top of a little rubber suction tube, as one might hold an eye cup. As the head is lowered over it, its edges are fitted under the eyelids, a process learned in a few trials. The salt solution touches the eyeball, and there is a slight suction which holds the glass in place. So securely is the lens held in place that only the firm pull of the suction tube will get it off.

At first, the lenses are worn for only a few minutes at a time. This period is then gradually lengthened; wearers have been known to keep them in for thirty-six hours at a stretch. But eye doctors recommend taking them out every four or five hours, both to rest the eye and to renew the liquid.

Three types of contact lenses are now available: blown, ground and plastic. Fifty years ago, a German glass blower named Mueller, already noted for his skill in making glass eyes, performed the delicate miracle of using glass-blowing technic to approximate the microscopic curvatures of corrective lenses. These blown contact lenses are still widely used. Although not as accurate as ground lenses, they are often more comfortable to wear and more easily inserted. A blown lens covers almost all the front half of the globe of the eye, with a clear glass window in the center, and the rest cleverly painted to imitate the coloring and veining of the natural eyeball. A startling object in the hand, but when in place, impossible to detect a foot away!

One optical firm has developed a lens of ground glass, made to prescription as accurately as any spectacle lens. Their lenses cover much less of the eye than the blown type; they look like tiny shrapnel helmets of crystal and cling tenaciously to the front two fifths of the eye. They are not visible to an observer, and if properly fitted, most wearers are unconscious of their presence.

At first, the fitting of these lenses was difficult and protracted. But the experiences of oculists, optometrists and expert mechanics have developed interesting innovations.

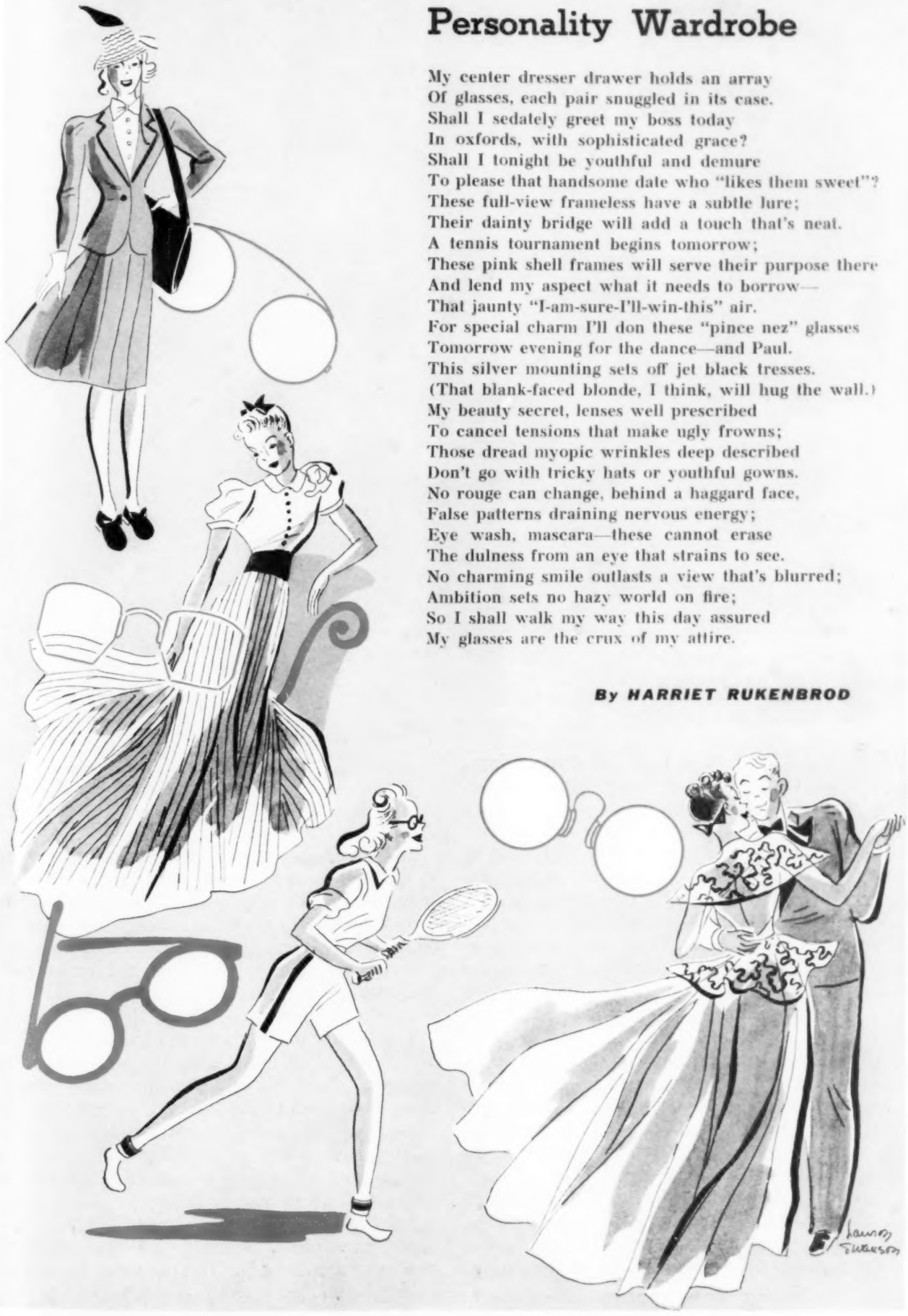
The theory of invisible eyeglasses was first expounded by Herschel, the English physicist, in 1827. Little was done with the idea until the late 1880's. Then A. E. Fick, noted eye specialist in Zurich, suggested to Professor Abbé, director of the Zeiss factory in Jena, the construction of a thin, accurately ground glass bowl with a spherical surface, which could be placed directly on the eye. Later F. A. Müller, the glass blower of Wiesbaden, who was already widely known as a constructor of artificial eyes, developed the blown glass contact lens. His work was so successful that he was made honorary doctor of medicine.

In 1932, Joseph Dallos, eye specialist in Budapest, Hungary, suggested the making of a cast of the living eye and fitting the contact lens on a cast exactly as one makes a cast of the mouth in order to produce accurately fitting teeth. In a search for suitable material, a product called Poller's negocoll was found. This material, which is boiled to make a soft paste, is poured into an approximately fitting glass shell, cooled to room temperature and placed behind the eyelids on the eyeball, which has previously been anesthetized with cocaine. Twenty or thirty seconds later the shell with the elastic film of negocoll is removed. This provides a negative cast of the eyeball so that an accurately fitting contact lens may be made from the cast.

An optometrist, William Feinbloom, developed a technic in which he measures the patient's eye. He makes a bronze cast to these specifications and then fits the contact lens to the cast rather than to the patient's eye.

An American manufacturing house now makes a white bakelite lens matching perfectly the color and dimensions of the eyeball. The center part is clear optical glass ground to the proper prescription.

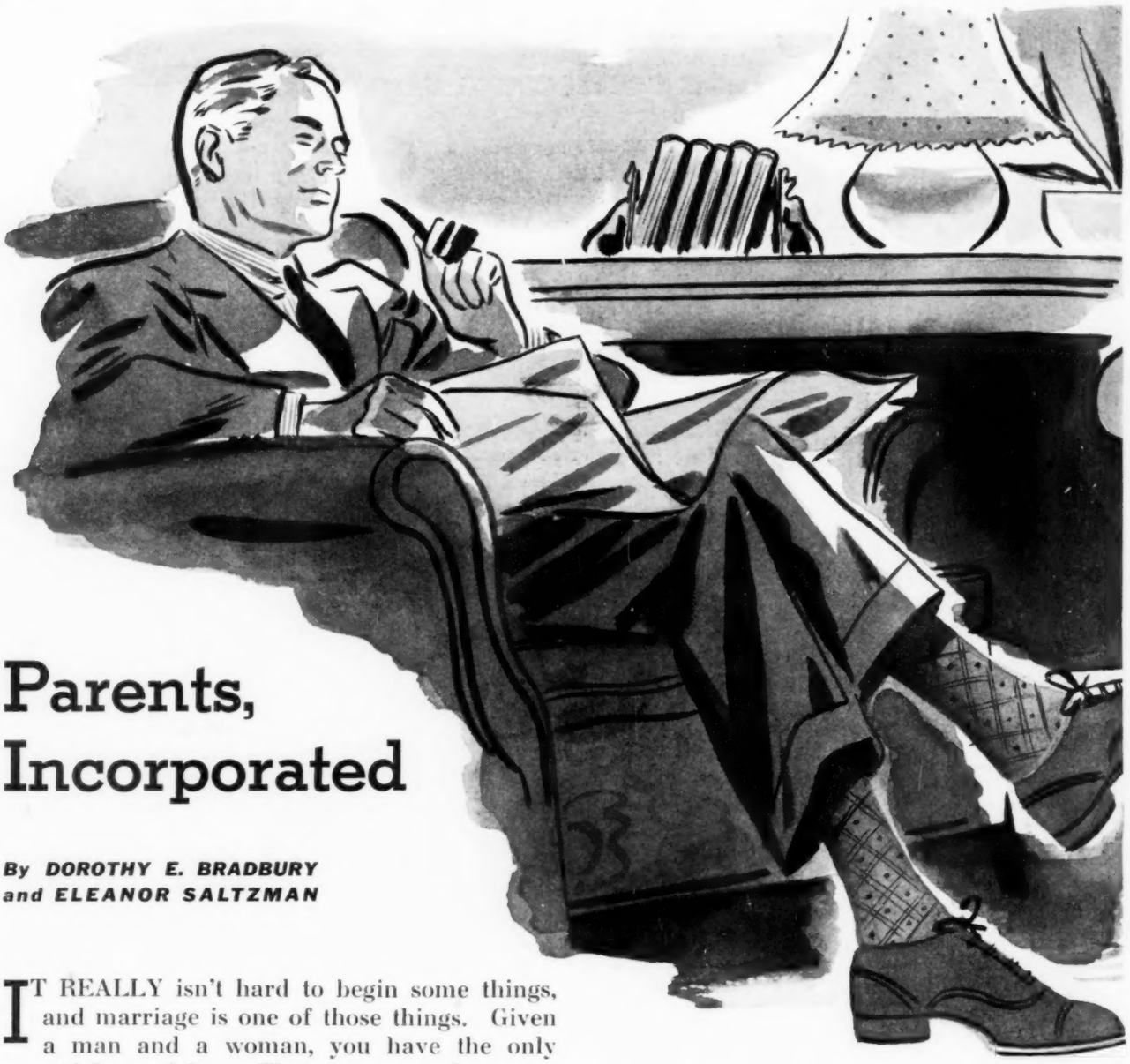
In Great Britain a contact lens center has been developed in which the Dallos technic is carried out. An optical manufacturer has organized a special department for the manufacture of contact lenses. It is important that there is immediate con- *(Continued on page 475)*



Personality Wardrobe

My center dresser drawer holds an array
Of glasses, each pair snuggled in its case.
Shall I sedately greet my boss today
In oxfords, with sophisticated grace?
Shall I tonight be youthful and demure
To please that handsome date who "likes them sweet"?
These full-view frameless have a subtle lure;
Their dainty bridge will add a touch that's neat.
A tennis tournament begins tomorrow;
These pink shell frames will serve their purpose there
And lend my aspect what it needs to borrow—
That jaunty "I-am-sure-I'll-win-this" air.
For special charm I'll don these "pince nez" glasses
Tomorrow evening for the dance—and Paul.
This silver mounting sets off jet black tresses.
(That blank-faced blonde, I think, will hug the wall.)
My beauty secret, lenses well prescribed
To cancel tensions that make ugly frowns;
Those dread myopic wrinkles deep described
Don't go with tricky hats or youthful gowns.
No rouge can change, behind a haggard face,
False patterns draining nervous energy;
Eye wash, mascara—these cannot erase
The dulness from an eye that strains to see.
No charming smile outlasts a view that's blurred;
Ambition sets no hazy world on fire;
So I shall walk my way this day assured
My glasses are the crux of my attire.

By HARRIET RUKENBROD



Parents, Incorporated

By DOROTHY E. BRADBURY
and ELEANOR SALTZMAN

IT REALLY isn't hard to begin some things, and marriage is one of those things. Given a man and a woman, you have the only essential requisites. That a man and woman will often so fall in love that they will want to marry is an event of such frequent occurrence that we accept it as simply one of the fundamental human instincts expressing itself in our particular social setup. Every year thousands of men and women begin marriage, undaunted by the price of butter, the statistics on divorce rates or the alarming pronouncements of psychiatrists.

But another truism follows which is equally as inevitable: The marriage so begun changes a man and woman unalterably. Two people have voluntarily entered into this relationship, and what they have entered forms a pattern for all their comings and goings, for all their actions and inactions. Even if the divorce court enters the picture and severs the alliance, still this man and this woman will never again be the same people who decided to marry, for love or otherwise.

This is doubly true if a child has been born to the man and woman so married. His birth is in no way his responsibility or decision. He is at the same time of his parents and separate from them. He views his parents and his world from his own eyes, none other. Yet for a decade and more, he is subject to them. A man and a woman, plus a child. This, then, the family.

The family is indeed an old institution woven of the fabric of human nature and social conventions. In it, we and countless other generations have been told, the child, as nourished by those most interested in his welfare, can most safely grow to maturity. There is no child so unfortunate as he who is robbed of his natural birthright, an unbroken home.

Yet the value of this birthright has been seriously questioned. Family life does affect its members unalterably. The man and the woman marrying started a chain of events of unswerv-

THE MAN AND THE WOMAN, PLUS A CHILD. THESE ARE THE FUNDAMENTALS OF LIFE ON EARTH AS IT IS LIVED IN THE SOCIETY OF MANKIND. MARRIAGE AND THE HOME HAVE DEVELOPED, OR EVOLVED, OUT OF ONE OF THE MOST POWERFUL INSTINCTS THAT MEN AND WOMEN KNOW.

ing significance. Even the new upstart critics of the institution admit that. But they also contend that this unchangeable influence wreaks more destruction than it achieves instruction, warps more lives than it nourishes happy adults.

These critics say that parenthood is essentially selfish. Fathers and mothers see in their children an extension or expression of their own power and egotism or resent their offspring as usurpers. There is rarely a fine feeling for the individuality of another, a separate, person. They want to possess their children as if they were property. A mother has determined to keep her son at all costs. When he is ready for college, she makes it almost impossible for him to adjust to the life there because of her desire to hold him a few years more. It is only with great determination that a lad can successfully break from such a tie. And even if he succeeds, he will bear the scars of that long period of overdependence forever. A shy, awkward child blunders along in school a misfit in her classes and isolated from the other children on the playground. All her teachers know why. But even their efforts cannot piece together again the confidence that ridicule and neglect at home have shattered. The roots of all maladjustment, said one psychiatrist, lie in the family, not in the individual.

Some would go even further. It has been advocated, in all seriousness, that the family as a unit for caring for children be abandoned. Children would be received in ideally equipped nurseries, regardless of class or ranking of parents. "No tears will be shed by any youngster," writes one enthusiast of his dream paradise for children, "because she is 'a janitor's child' nor because she does not know her father. 'Fathers' and 'mothers' will drop out of the picture. Happy joyous activity—the continued conquering of new worlds of things—will absorb their every waking moment. . . . And will the home be missed! I know that we can plan and equip an institution to-day that will be better run than any home I have ever been in, because the nursery will be planned for the child. Its only business will be the care and happiness of

the child. I would gamble my all too that after three months in our nursery no youngster will want to go home even for a week-end . . ."

The family is admittedly no longer important as an economic unit. Time was when everything from bread to breeches was made at home. Now Father's suits are needled by a famous tailor, and the family eats bread of a brand made popular by some riotous radio comedian. Father has an insurance office downtown; Uncle Jim is a linotype operator for the biggest newspaper in the city, and the small son of the family no longer fills the woodbox after school. Instead he has a paper route over on the West side. If Father has evening calls to make, he doesn't even come home for dinner and so may not see his son throughout the entire day. The family is no longer necessary for the day-after-day routine of maintaining economic existence. It is only justified if it furnishes a secure nursery for the growth and development of its members toward rich, happy living. One of the major tenets of this program must be maximum care for childhood. If it is failing miserably to nurture its individual members toward free, happy adulthood, it had better go out of existence.

A man, a woman and a child. Can they contribute anything as lasting to each other's happiness as they can to their mutual unhappiness? Have the man and woman anything to give the child for whose very physical being they are responsible?

The great miracle worker of our generation has been science. Afraid of nothing, not even colossal failure, painstaking enough to measure matter by split seconds and hair-breadth atoms, the scientist has surpassed his persistence only by his boldness. He has laid hold of the finite and the infinite, the mammoth and the microscopic, the minute patterns of rock formation and the tangled interweavings of men's relations to each other. Nor has the family escaped this searching scientific eye. At a number of points the man, the woman and their child have had to submit to the rigors of scientific scrutiny. And as a result, casting up these findings, we can see something of the tone quality of family relationships. We can, by these means, gain perhaps a glimpse of the extremes to which such relations can go and discern what balances are possible between maladjustment and happy acceptance among parents and children.

Up by the mill in our town stood a group of houses much the worse for wear—untidy cottages on barren lots. We stopped before one, in the shade of which two dirty, scrawny children played. Their faces were thin, uneven and a little wistful, much like their father's. Little of the charm of childhood was evident. Even their play revealed the poverty of their physical stamina, the dulness of their small brains. Some one commented. Men and women of that caliber should never be allowed to reproduce their kind. What could be expected of such parents but dull witted, half sick children.

Once we thought that was true, and we still believe that inheritance is a powerful force. But some of our scientists have turned up an odd fact. A group of orphans in a state home were given intelligence tests before they were placed in foster homes and at regular intervals thereafter. They were most of them of rather inferior intelligence and came from homes low both in this world's goods and in mental equipment by which they might better themselves. Their own parents had been either unable or unwilling to make a place for them, so that the state had taken them in charge. Now, however, they went into homes of a distinctly higher level than they had yet experienced. They had parents who sought them, who made a place for them in their lives. And they met the challenge. The longer they lived with these new parents the higher their intelligence level climbed until the mentality of the children approximated that of the environment into which they had grown. If they were placed as babies, the greater was the mental gain for the child. Hear ye who once said that intelligence is a fixed, unchangeable quantity. Dull little children of dull witted parents become normal happy boys and girls, thanks to a home that stimulates the growing of wits. Score one for the home—the right kind of home.

And then some other scientist took careful record of 500 delinquent and maladjusted children and what became of them after they were placed in foster homes. These homes were carefully selected for this purpose. They needed to be. The cards were stacked against them.

Already these children were protesting against society. They were stealing, running away and becoming shy, frightened or erratic young rebels. Yet these foster homes took the children and attempted to wipe away their unsocial desires and to restore rightful responsive childhood where it belonged. The records showed that 90 per cent of the normally intelligent children and almost half of the others responded favorably to the efforts of their foster parents and became a successful part of the home in which they found themselves.

Personality is one of the human factors most easily influenced by outside forces. Science has long been intrigued by what happens to personality under various conditions, and here the home has the best chance possible for making itself felt. In the case of jealousy, several odd relationships were found. The more children there were in a family, the less jealousy was manifest. Some mothers were too solicitous of the welfare of their children, and others were inconsistent in dealing with them. They punished one day for what was overlooked the day preceding. In four fifths of such cases the children were jealous. In well adjusted homes in which parents and children were at ease, pleasant and yet not too dependent on each other, little jealousy was manifest.

Certain adult personality traits could be clearly related to what had happened to the individual as a child in the home. Many grown people who were sexually poorly adjusted had as children been subjected to threats and punishment for sex practices. Affection freely expressed helped children to associate easily and pleasantly with other people when they were grown. Fathers who were on intimate terms with their children aided in achieving the same end.

But a much broader study of what the home can do to the personality was made by Frances and Fillmore. Two large groups of school children were compared, one from a school in a rich suburban district of a city, the other in a crowded section where people of the laboring classes lived. The physical surroundings of these children differed markedly. Homes in the poorer area were crowded and poorly furnished, and neither home nor neighborhood offered adequate recreational facilities. The wealthy district was just the opposite, as far as worldly goods were concerned.

In spite of these facts of economic significance, the children from the two schools showed small personality differences. The places where these children lived had little to do with the wholesomeness of their personalities. It was the way their parents regarded life that made a difference. Factors that *(Continued on page 466)*

THE LONGER THEY LIVED WITH THESE NEW PARENTS THE HIGHER THEIR INTELLIGENCE LEVEL CLIMBED UNTIL THE MENTALITY OF THE CHILDREN BECAME THAT OF THEIR ADOPTED ENVIRONMENT.

ARTIFICIAL FEVER

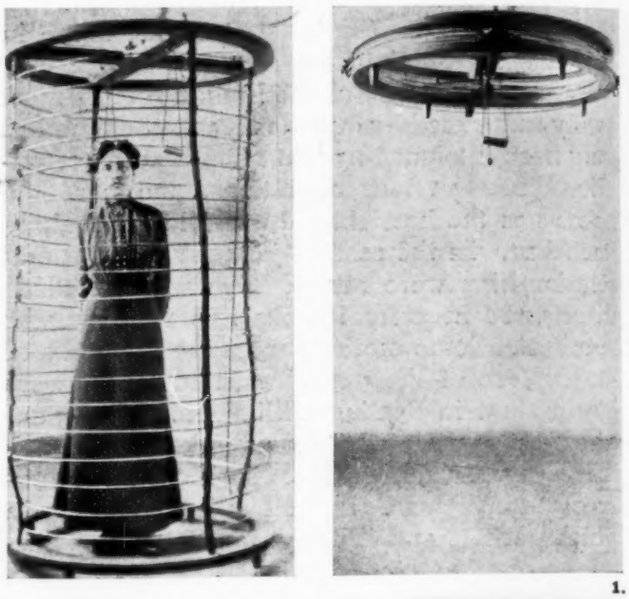
***Electricity again serves science! This time not as a light for the world, but as a cure for diseases that have never before succumbed to treatment. A person in the area of action of high powered electric radiation feels his temperature mount as artificial fever is being produced*—By RICHARD KOVACS**

THE ART of healing makes use of the science of physics rather extensively nowadays by employing an increasing number of physical devices for the early recognition and treatment of disease. A French physician and scientist prophesied half a century ago that the day was coming when many diseases would be treated by electricity, heat, light and agencies still undiscovered.

D'Arsonval made known the fact that it is possible to send through the human body an electric current of high frequency without danger or discomfort and apparently with good effect. He also discovered that by surrounding a person with a set of stout wires like a cage and passing a high frequency current along this cage, an electric light bulb held by the subject will light up. This proved that some of the electricity had passed over to the body without direct contact between the wires and the body.

This method of autoconduction was the first application of wireless electricity to the human body. Because the current employed was weak, the effect of this procedure was not remarkable; but d'Arsonval's apparatus was found useful by electrical engineers. In 1898, two years after Marconi began his wireless telegraphy, a French physicist took one of d'Arsonval's medical sets up the Eiffel Tower in Paris and used it successfully for sending wireless messages.

By a strange turn of events, thirty years later in the United States an electrical engineer, Whitney, rediscovered the effect of wireless electric waves on the human body. He found that persons working in the field of the powerful short wave sending tubes of WGY, radio station at Schenectady, N. Y., complained of headaches and often became hot and feverish. He concluded that the short wave energy absorbed by the human body was responsible for these fever symptoms. Soon interesting tricks were performed in his laboratory, one of which was cooking eggs by placing them in a radio electric field. Whitney's reports on the production of fever in the body by means of radio waves came just when medical men were beginning to produce artificial fever for curative purposes by inoculating patients with the germs of malaria.



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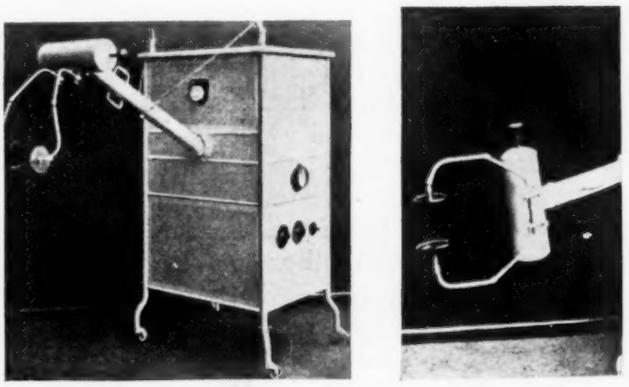

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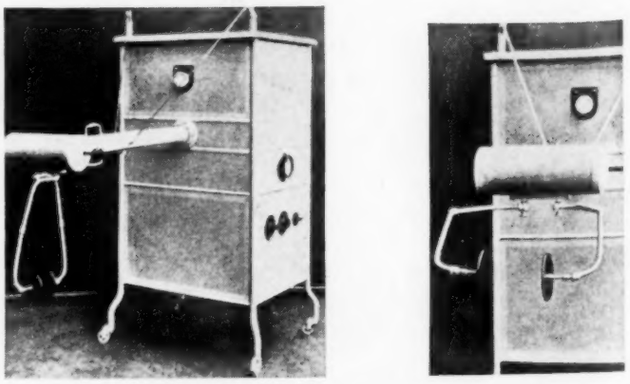

FIG 1. D'ARSONVAL'S COLLAPSIBLE WIRE CAGE, WITH WHICH HE PROVED THAT ELECTRICITY PASSED OVER TO THE BODY WITHOUT DIRECT CONTACT. FIG. 2. FOUR VIEWS OF AN EARLY MODEL SHORT WAVE DIATHERMY APPARATUS, WHICH DID NOT DIRECTLY CONTACT THE BODY.

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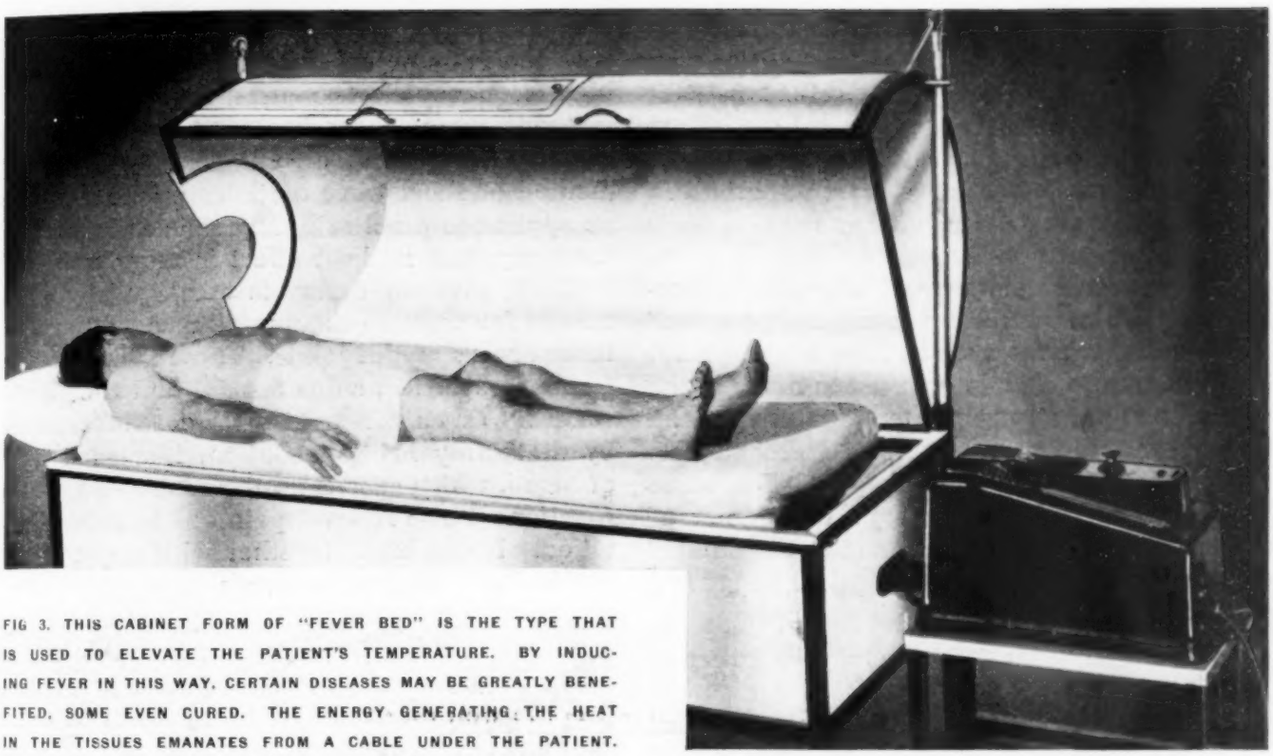


FIG 3. THIS CABINET FORM OF "FEVER BED" IS THE TYPE THAT IS USED TO ELEVATE THE PATIENT'S TEMPERATURE. BY INDUCING FEVER IN THIS WAY, CERTAIN DISEASES MAY BE GREATLY BENEFITED, SOME EVEN CURED. THE ENERGY GENERATING THE HEAT IN THE TISSUES EMANATES FROM A CABLE UNDER THE PATIENT.

The principle of treating some hitherto baffling diseases by artificial fever was discovered by a Viennese physician, Professor Wagner-Jauregg, for which he received a Nobel prize. But he had to inoculate one disease to cure another, while American scientists offered a much more efficient method without the inconvenience of another disease. Even before Whitney's experiments, American physicians—notably Neymann—developed fever by another method of high frequency electricity known as diathermy. The discoveries of Whitney, Neymann and other Americans quickly forged an interesting link of international cooperation in medicine.

Next came the news from Germany that Schliephake of Giessen produced local heating effects in any part of the human body by placing it in the energy field of a short wave radio set. This method became known as short wave treatment, or more correctly as short wave diathermy. The development of this electrical means of heating either the entire body

4.

FIG. 4. HEAT TREATMENT OF ANKLE BY SHORT WAVE DIATHERMY COIL WRAPPED AROUND IT.

or its parts opened up a large field for medical research and has produced remarkably beneficial effects in some disease conditions.

Artificial fever treatment, which had its greatest spur from the observation of the effects of exposure to short wave broadcasting apparatus, is now in addition produced by such other means as electric light baths, air conditioned or steam heated cabinets. Two years ago an International Conference on Fever Treatment was held in New York City, at which medical men from all over the world discussed the results of fever treatment. There was general agreement with the fact that experienced medical advice and skilled nursing care are more important in administering artificial fever than the best fever producing apparatus in unskilled hands.

Induced fever has proved especially effective in diseases caused by so-called "parasitic" germs. Some germs, such as those of gonorrhea, have become so completely used to living in the human body at its normal temperature that an increase of temperature by a few degrees affects them. Artificial fever maintained for some hours either directly destroys the germs of gonorrhea or sufficiently stimulates the natural defensive forces of the body against gonorrhea and other germs to stop their further growth. Infections of gonorrhea which are resistant to the ordinary methods of treatment are therefore the most important objects of fever treatment. In joint inflammation or arthritis caused by gonorrhea, almost dramatic relief from pain and swelling can be accomplished by artificial fever. Similar results have been accomplished in gonorrheal inflammation of the eye and in stubborn infections of the pelvic organs in both women and men. Another large field for fever treatment includes such affections of the central nervous system as locomotor ataxia and general paresis. These diseases are due to old infections with syphilis and yield more readily to the well proved method of drug injections when such treatment is combined with a course of artificial fever.

Fever treatment is also effective in the disease of children known as St. Vitus's dance, or chorea, as well as in certain forms of bronchial asthma resisting all other forms of treatment. Some cases of chronic arthritis of the so-called rheumatoid type may also be benefited by fever treatment. Here, again, such a procedure must be combined with other recognized forms of treatment, by diet and if necessary by surgery. In artificial fever, temperatures of varying height and duration are applied according to the disease and the patient's condition. It must be administered only in institutions and under an especially trained staff of physicians and nurses.

Deep heating of certain regions or parts of the body by short wave diathermy, consists of placing these parts in a so-called electric or electromagnetic field without direct contact by metal plates. The results of this method are similar to the well tried method of diathermy in which metal plates are placed in direct contact with the body or an extremity and in which a high frequency electric current passes. In both methods there is heating of the parts in the electric field. The advantage of the newer method of short wave diathermy is that it can be applied to practically any surface or part of the body, and its heat effect is more uniform.

Short wave diathermy is employed by physicians for treating inflammatory conditions of inner organs and of joints. These include some forms of arthritis, sinus disease and rheumatic conditions such as neuritis. Repeated treatment by diathermy brings about an increased flow of blood, which speeds up the return of normal function; it also relieves pain due to nerve irritation. If employed together with appropriate medical and surgical treatment, short wave diathermy helps to combat many inflammatory conditions and after-effects of some injuries.

The large majority of medical men agree that it is the well directed and well controlled deep heating effect of diathermy on the human body which brings about relief. The idea that certain wavelengths exert special effects on certain diseases is untenable or at least not proved. As a matter of fact, in the early development of radio, some of the ever-ready quacks at once attempted to exploit the gullible public. They claimed that by turning the dial to number 25 of a special radio set they could kill cancer in the body, and with number 47 they could stop the smoking habit. In contrast to the earlier types of the same breed, the "patent medicine" fakers, these radio spellbinders were not clever enough to endure searching investigation. It is the work of earnest students in hospitals and medical laboratories which now slowly but surely paves the way for still more effective use of diathermy for treating the sick.

The subject of electricity in medicine is an inspiring demonstration of how progress is interlinked, not only in the arts and sciences, but with other fields all over the civilized world. In fulfilment of the prophecy of d'Arsonval we can look forward to further interesting discoveries in the realm of physics to benefit the health and happiness of humanity.

Preparing for Baby

By WILLIAM F. MENGERT

MUCH has been written concerning the expectant mother's routine, and there are elaborate and easily available directions for her diet, clothing and exercise. However, it is difficult for the average woman to obtain information concerning those things which will happen to her during pregnancy; and if she is blessed with normal curiosity, she is intensely interested in knowing what is ahead. In other words, what may she expect during the months of pregnancy and the hours of labor? Of course, it must be recognized at once that one woman's experience may be entirely different from that of the average woman and yet be a normal one. Nature allows for wide variations.

The pregnant woman may expect some degree of nausea, vomiting and disturbance of appetite soon after she suspects pregnancy. Profound changes take place quite early, among them decreased stomach acidity and diminished intestinal peristalsis (successive wavelike contractions of the intestines). These may, if too vividly perceived, lead to "morning sickness." There is a growing belief that the naturally serene, unruffled woman who is completely happy in her pregnant state will be bothered little, if at all, by "morning sickness," while her nervous, excitable sister, acutely worried by the enormous number of new problems created by pregnancy, will suffer to greater degree.

Every expectant mother will receive considerable gratuitous advice from relatives and friends. Maternity is an age-old mystery, so overwhelming that folklore and superstition surround it on every hand. And so each old wife has her choice bit of misinformation which she feels duty bound to give the newly pregnant woman. If she, in turn, treats their solicitations seriously, confusion, if nothing worse, will follow. Advice should be accepted only from the carefully chosen medical counselor, and the sooner he is consulted after pregnancy is suspected, or recognized, the better.

The pregnant woman should not anticipate the appearance of untoward conditions or complicating diseases. Minor conditions or hidden physical weaknesses, which may arise because of the additional physical burden of pregnancy, are usually recognized and can be cared for by the physician. This is one of the main reasons why prenatal care—an obstetric concept of the present century—is so important.

Every woman would like to know when she may expect to become a mother. There is great variation in the duration of normal pregnancy. Scientific medicine has yet to solve the riddle of what factors institute labor and, by ending pregnancy, determine its duration. The average length is 280 days, or ten lunar months of twenty-eight days each or forty weeks. Naegele suggested the following rule for estimating the date of confinement: Add seven days to the date of the *first* day of the last menstrual period, and count back three months. If the first day of the last menstrual period were July 8, by adding seven days and counting back three months the expected date of confinement is estimated to be April 15 of the following year. A woman pregnant for the first time may expect confinement within two weeks on either side of the calculated date, so that her baby will in all probability be born between April 1 and April 30. By fixing her mind on the latter date, she will probably avoid considerable mental unrest, because the last weeks of pregnancy are tedious, and it is unwise to prolong them by anticipating the baby too soon.

Another question of intense interest is whether the parents may expect a boy or a girl. Efforts have been made to predict the sex of the unborn child by the rate and character of its heartbeat and by other similar means. There is as yet no known scientific way of predicting sex. Several years ago it was announced that such a method had been found; but when carefully collected data from several reliable clinics became available, it was evident that the announcement had been premature and overenthusiastic. To date, the best method of dealing with prospective parents unwilling to believe in the inability of their physician to predict sex seems to be that of a famous obstetrician, now dead. If the parents desired a boy, he told them they would have a girl, explaining his unscientific behavior on the basis that if a boy were born they would forget his prediction in their

happiness, while if a girl were born he could say, "I told you so."

Certain facts concerning the normal development of the baby in the uterus are of interest. The baby is completely formed in miniature in its mother's womb by the end of the eighth week of pregnancy and subsequently merely increases in size. This fact is known to few laymen and is of importance in reassuring the pregnant woman who fears her baby may have been "marked." Developmental defects—if any are present—have already taken place by the third month of pregnancy, and nothing the woman experiences later on can possibly have any effect in causing deformities of the baby.

Ordinarily a woman may expect to feel life, that is, feel the baby move, about the eighteenth or twentieth week, although there is great variation in the time when this phenomenon appears. Occasionally the baby may give movements perceptible to the mother as early as the tenth week, and in rare instances a woman may never experience them.

By the end of the twenty-fourth week (six lunar months) the mother's condition begins to be apparent. Shortly before, or about this time, alterations in clothes to allow for increasing size become necessary. From then until her baby is born the mother's size increases rapidly, and she becomes acutely aware that the word "gravid," meaning heavy, is well chosen when applied to pregnancy. Most women pregnant for the second time seem so large to themselves that they anticipate twins. The womb and abdominal walls have been stretched by the previous pregnancy and have not regained their former tone. Consequently subsequent babies are not held in so rigidly by the muscular walls, and the resulting bigness is attributed to the possible presence of twins.

Of course every woman is interested in the size her baby will attain by the time it is born, because she knows that a large baby may mean a difficult labor. Many women diet in the mistaken hope that by so doing they may limit the

baby's size. As in the case of prediction of sex, there is much evidence to show that the growth of the baby in size is independent of the amount of food taken by the mother. If the mother is suffering so acutely from a dietary deficiency as to be ill, the baby—who is unable to obtain those food elements which it needs—will die, and a miscarriage results. Fortunately such extreme states of maternal malnutrition are rarely seen in the United States. Ill-directed efforts at dieting can only do harm to the mother, for the baby is very exacting and takes from her body stores those building materials which it needs. It is better to supply the baby than to allow it to tap body depots.

On the other hand, it is unwise for a pregnant woman to become fat in foolish attempts to store up ample supplies for the baby. Approximately a 20 pound increase results directly from

pregnancy. A woman weighing 35 pounds more at the end of pregnancy than she did at its beginning has gained 15 pounds in body weight, probably stored as fatty tissue.

An interesting phenomenon known popularly as "lightening," often attended by a few transient pains, occurs a few weeks before labor in most women pregnant for the first time. Prior to lightening, the baby is supported by the muscular walls of the abdomen. A few weeks before labor, the baby's head descends into the bony pelvis, which subsequently bears the baby's weight. As a result, the size of the abdomen decreases slightly, and the woman does not feel so heavy and unwieldly as she did. Lightening does not usually occur in women who have borne children, because the muscular walls of the abdomen and uterus are lax, and the head is not forced into the pelvis until labor begins.

The expectant mother is intensely interested in knowing by what means she may recognize the onset of labor and in what it consists. Usually a pain, often thought to be an intestinal cramp, or one similar to a menstrual cramp, occurs up in the small of the back, to be followed fifteen or thirty minutes later by another. Gradually the pains, which are symptoms of uterine contractions, become stronger, more frequent and longer in duration and work around to the front, so that they occur low down on either side of the abdomen. During the uterine contractions the abdominal contour changes shape, and the abdomen becomes hard.

In early labor the pains are said to be mild and are usually borne with equanimity. Sometimes false pains (occurring oftener in later labors than in the first one) appear for a while, and the woman may think erroneously that she is in labor. Occasionally labor may begin by a sudden gush of fluid, the rupture of the "bag of waters." This is the amniotic fluid in which the baby has been suspended during prenatal life. In this event, pains usually begin within twenty-four hours. When a pregnant woman who is near the expected date of confinement begins to have rhythmically recurring pains of increasing intensity in the back or abdomen, she may consider that labor has begun. There are a few exceptions to this rule, so that in case of doubt it is better to allow the doctor to decide the matter.

Labor is commonly divided into three stages. The first is occupied with the opening of the mouth of the womb and has an average length in women laboring for the first time of sixteen hours. However, there are such great variations in duration that extremes of four and twenty-eight hours must be considered normal. In women who have borne children the variation is even greater, but the average duration is twelve hours. Labors as short as one to two hours are not uncommon. The position of the baby does not change greatly, because the force of the uterine contractions is utilized to cause the opening of the mouth of the womb.

It is dangerous, except in extreme urgency, to attempt to hurry this stage of labor. Uterine contractions are not under the control of the conscious mind, and any attempt of the woman to "bear down" with her abdominal muscles during the first stage of labor will only tire her out. Not only is "bearing down" at this stage useless but also may do considerable harm to the structures which support the uterus, so that "falling of the womb" may develop in later life. Generally the "bag of waters" breaks toward the end of the first stage, although occasionally the baby may be born with the sac intact. Then it is said to have been "born with a caul."

The second stage of labor begins with the complete opening of the mouth of the womb and has an average duration of two hours. During this time the baby descends through the pelvis and is born, so that this may be called the stage of expulsion. The character of the pains changes with the onset of this stage. The dilation of the vagina sets up nervous reflexes, which cause the woman to squeeze with all her might. Whereas during the first stage she twists and turns in bed with each pain, now she exerts conscious effort, seizes the side or head of the bed and "bears down" with her abdominal muscles. The greatest pain of labor occurs during the second stage, especially when the baby's head is born. Approximately 96 per cent of all babies are born headfirst.

The third stage of labor ordinarily lasts about fifteen minutes. The afterbirth, the organ that throughout prenatal life transmitted nourishment and oxygen from the mother to the baby, becomes separated from the wall of the womb and is extruded.

Every intelligent individual feels that the mother should be spared, by all safe means, as much as possible of the pain and agony of labor. The ideal obstetric anesthetic should render the woman oblivious to pain, should not obstruct labor by eliminating those muscular contractions which make childbirth possible and above all should be safe for mother and child. Such conditions are hard to meet and often cannot be met except at the expense of the safety of the child.

The best type of anesthesia so far devised seems to be some form of hypnotic drug or combination of drugs administered during the first stage, and some type of inhalation anesthesia for the second stage. This is a modification of the older "twilight sleep," which is not now in general use because of the possibility that it may harm the child. "Twilight sleep" depended on the use of a hypnotic drug, scopolamine, throughout the first and second stages of labor. Since the second stage is far more painful than the first, it became necessary to raise the dosage of the drug to the maximum just before the baby was born, so that the effect of the drug was at its height when the baby had to begin an independent existence. Sometimes the baby obtained sufficient scopolamine to cause an alarming delay before breathing.

By using scopolamine, or some of the more modern hypnotics, only during the first stage and by employing inhalation anesthesia—gas, ether or chloroform—during the second stage, this hazard is lessened. There is an infinite variety of drugs prepared to achieve these ends.

In fact, so many types are on the market at present that it is impossible to try each sufficiently to make a critical evaluation of its safety and worth. However, there are a few tried and trustworthy combinations, and every intelligent physician chooses and acquires proficiency in the use of some of them.

Obstetric anesthesia, admittedly, is far from perfect. This fact has caused the appearance of faddists who try to eliminate the pain of labor by various types of operations, more or less radical. In the hands of experts such means carry slight, although definite, danger, but in ordinary use they exact a yearly toll of lives. The United States still has too high a maternal mortality rate, generally conceded to be caused by the too frequent operative interference with the course of normal labor. An eminent obstetrician cites "the demand on the part of obstetric patients for shorter and more comfortable labors" as one of the chief reasons for this operative furor.

I do not mean to imply that we should return to the barbarity of preanesthetic days or that we should never aid the laboring woman; but I do wish to emphasize that unnecessary interference with normal labor is dangerous. Despite the disagreeableness and pain of normal labor, man has yet to devise a safer method of delivering the laboring woman. Every woman must realize the extreme importance of the doctrine of "safety first" as applied to obstetrics.

This, then, is the expectant mother's right: to look forward to a normal pregnancy and not to a state of illness; to carry on normal activities during pregnancy limited only by the dictates of medical common sense; to expect a normal labor with all the relief from pain that is compatible with safety for herself and her child; to anticipate all the joys that follow the birth of a child, and to be in such a state of health after the baby is born that she may realize them.

Cost of Maternity Care

By SIBYL W. JOHNSTON

"WE WOULD love to have a baby, but we don't want to get into something we can't pay for. Is it really very expensive? Just how much does it cost to have a baby?" To answer questions like these, the Maternity Center Association of New York City made a survey in widely scattered cities, towns and rural areas to disclose the actual costs involved.

That inexpensive care is not always poor care, and that high fees do not always indicate the best care are among the first things found to be true, no matter where you live. For those who cannot afford to pay much, competent dispensaries and clinics are maintained by private charities in connection with hospitals to share the cost of prenatal and postnatal care and hospital or home delivery with families of the lower income classes. In one large midwestern city there is such a place where they may receive the best of care and instruction before the baby comes, delivery at home by an obstetrician and staff, and clinical care for six weeks afterwards—all for as little as $15. This hospital encourages women to be delivered at home, if they are normal. However, if in the doctor's opinion the mother-to-be is at all likely to present any complication that would call for hospital facilities to handle, she must come to the hospital for delivery. Higher costs prevail for those who are able to meet them: In this particular hospital, the fee ranges between $70 and $75 for clinical instruction and care and delivery in a ward.

Where this service is not available, the young couple must be prepared to meet the fees of both a doctor and a hospital, if they desire hospital delivery. If they do not and if hospital facilities will not be needed, the survey shows they may expect to pay the doctor between $25 and $77—depending on the average level of costs typical of the community in which they live. However, the doctor's fees are always in addition to those of the hospital when the hospital is used.

When the expectant mother makes those monthly visits to the doctor before the baby is due, he not only gives her a complete physical examination, which includes a urinalysis and the taking of her blood pressure, but also advice on diet, exercise and so forth. Incidentally, there is a laboratory fee for the urinalysis, which ranges from $1 to $3 each time, depending on local rates. This is charged by the laboratory to the doctor, so it must be turned over as a separate item to the patient. This physician, then, must give his time for eight or more of these office visits in addition to sacrificing his leisure to be on call for twenty-four hours a day nearing the time of delivery. When labor does start, he must give her his undivided attention, perhaps in the dead of night or during his busy hours for office consultation. Then he must see the mother several times during the first six weeks for postnatal care after the baby has come. So it is obvious that the doctor's charge is not exhorbitant, whatever it is agreed to be.

In general, the cost of maternity care depends on three things: First, the family income is considered; second, the size of the community or residence determines the general scope or range of cost, and third, the practitioner who attends the delivery has his range of fees when taking the first two points into consideration. The obstetrician commands about twice the fee of the general practitioner. Charges tend to be higher in the cities and less in the small towns and rural areas.

A BABY COSTS—

At Home:

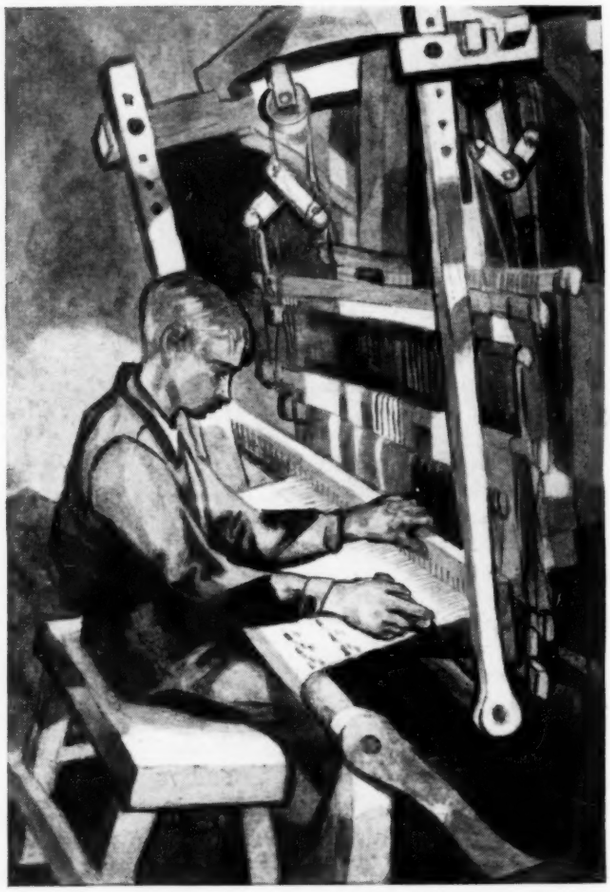
(Exclusive of nursing and other services)

General Practitioner	$ 25	to	$ 75
Obstetrician	50	to	250

In a Hospital:

Prenatal, delivery and postpartum care in a hospital clinic and ward with medical service	$32.50	to	$ 85
Ward care	25	to	77
Private room, including delivery room and anesthetist	55	to	140
General practitioner's care and ward service	50	to	152
General practitioner's care and private room	80	to	215
Obstetrician's care and private room	105	to	390

Range in prices is due to local conditions: The first figure is the *average* cost in communities where care is cheapest, and the second is the *average* cost in communities where care is most expensive.



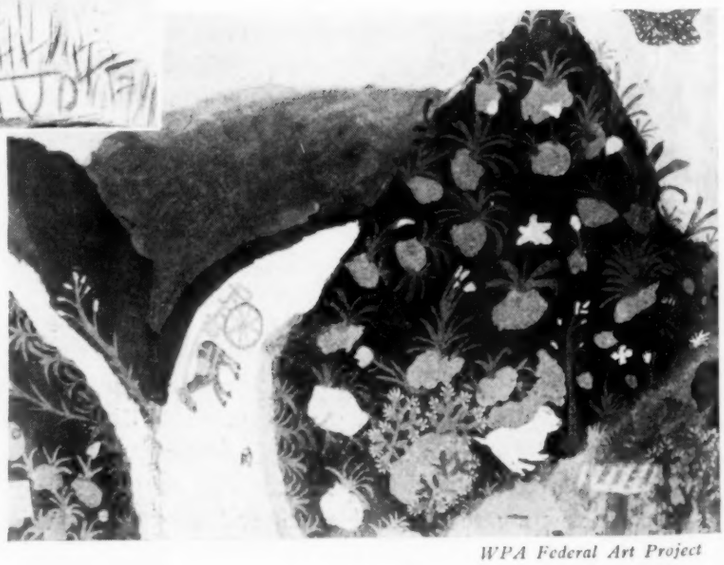
ART in MEDICINE

WHILE the exact relationship of art to medical science is still a debatable question, the experiments with art in the medical world in the past two years have proved so valuable that even the most literal-minded physician cannot fail to be aware of its therapeutic benefits.

Art which offers amusement and relaxation, art which stimulates the imagination, art

THIS IS ONE PANEL OF A MURAL "CHILDREN AT WORK AND AT PLAY" EXECUTED BY HELEN WEST HELLER FOR A WARD FOR HANDICAPPED BOYS AT NEPONSIT BEACH HOSPITAL, LONG ISLAND, N. Y.

TWO EXAMPLES OF THE WORK DONE BY CHILDREN IN THE PSYCHIATRIC DIVISION OF BELLEVUE HOSPITAL ARE SHOWN AT LEFT AND BELOW. GRAPHIC ART HERE BECOMES A MEANS OF CONTACT WITH THE CHILD'S NATURE AND OFTEN SHOWS WHAT THERAPY IS NEEDED.



THE DRAWING MAY REVEAL THE FANTASIES AND UNCONSCIOUS LIFE OF THE CHILD, NOT ONLY TO HIMSELF, BUT TO HIS PSYCHIATRIST, WHO MAY BE GUIDED IN CHOOSING THE PSYCHOTHERAPEUTIC METHODS MOST ADAPTABLE TO THE INDIVIDUAL CASE.

WPA Federal Art Project

By ELLEN P. O'BRYAN

designed to produce specific psychologic reactions in various types of patients, art executed in colors carefully selected after consultation with physicians and psychiatrists—all these are concerns of the WPA artists doing art work for hospitals.

There is one type of public building which more than any other actually needs interior decoration, in order that the "institutional atmosphere" may be eliminated as far as possible. This is the tuberculosis hospital. In the new tuberculosis hospitals in New York state there is a pleasant, comfortable outpatient waiting room in which persons who have been referred to the hospital by their physicians wait to be examined. In the Oneonta Tuberculosis Hospital, the waiting room has been decorated with a large mural painting by Bertram Hartman. This work depicts in harmonious colors features of historic and natural interest in New York state, from Long Island to Niagara Falls. It is entitled "An Imaginary Projection Pertaining to New York State." Patients waiting for examination are diverted by this absorbing picture.

In selecting art for a hospital one must bear in mind the shut-in patients. Paintings are hung in the rooms of these patients as a traveling exhibit. A picture hangs in one room for a week or so, and then before the patient can tire of it, another is substituted which has meanwhile hung in another room. After a set of pictures has been circulated it is exchanged with one from another hospital. Thus, the pictures will be moved from room to room at stated periods and will help to develop in each patient the maximum of mental rest and contentment, which is so necessary in the treatment of tuberculosis, especially.

In rural sections, it was found that pictures of country life should be chosen. Experiments were made first with pictures clipped from magazines, from which it was learned that patients from country districts were soothed by farm scenes and loved to lie and look at them. They somewhat resented pictures of city life and the more intense works of art. Therefore, most of the pictures chosen were simple, homey pictures. Some of them are of animal life; others are country landscapes and still others are of apples or flowers or birds or winding rivers. None of them are garish, and all are restful.

All murals now being executed for wards in hospitals fall into two general types; those designed purely for the entertainment and diversion of the patients and those designed for more specific psychologic reasons. An example of the latter is found in the thirty-three paneled mural being executed by Helen West Heller for a ward for handicapped boys in Neponsit Beach Hospital, Long Island. In this mural, "Children at Work and Play," the artist shows handicapped children at work and play with normal children. The obvious purpose is to make the little patients feel included in the world of normal, healthy, happy children. In every instance the artist was careful to depict handicapped children in activities in which it was possible for them to participate.

The fantasy or escape type of mural is offered in "Circus," designed and executed by Louis Shanker, for the children's dining room of the same hospital. Its therapeutic value is found in the gay and humorous pictorial suggestions, especially important to children whose imaginative fancies must be stimulated.

The nine murals scheduled for placement in the occupational therapy rooms and recreational rooms of the new Bellevue Psychopathic Hospital in Manhattan represent one of the most interesting experiments ever attempted in a hospital of this type. As in all hospital murals, color and subject matter were carefully selected for specific effects, and both physicians and psychologists consulted with the supervising artists.

In Manhattan the WPA Federal Art project was responsible for an innovation in the medical world. The children's ward of the Post Graduate Hospital was hung with an exhibition of thirty-five paintings that were the work of young pupils at the free art classes conducted by the WPA Federal Art project teachers at schools, clubs, settlement and neighborhood houses throughout the city.

Doctors reported that the therapeutic value of the exhibition in helping to heal the ills besetting the wan looking young patients could not be overestimated. The youngsters had been especially benefited by the cheerful atmosphere which the colorful and decorative pictures had given the wards and showed a great interest in the subject matter which suggested and helped them compose "make-believe" stories that aided in whiling away more pleasantly the long hours of hospitalization. The restful and refreshing

atmosphere derived from the paintings has helped many a tot on the road to recovery.

One little patient in a plaster cast, evidently a "Huckleberry Finn" at heart, insisted that a picture of fish be hung by his bed so that he could see it whenever he lifted his eyes. It probably made him dream of fishing holes, fat worms dug up in the sunshine of a summer day and an imposing string of trout proudly presented to some admiring adult. It made him forget his plaster prison for a while at least and to relax and be warmed by the pleasant glow that is the result of the happy daydreams of childhood.

The doctors decided that monthly changes of the exhibitions in the children's ward would continually renew the patients' interest and that "something new to look forward to" every four weeks would make the hospital ward an interesting place in which to stay. It would help to overcome homesickness and keep the young patients contented and therefore ease the burdens of the children and of the doctors and nurses as well.

The care of the diverse behavior and mental disturbances in children, which come under the Psychiatric Division of Bellevue Hospital, has made it possible to organize ward routine for the forty to sixty children ranging from 2 to 15 years of age, so that their multiple activities are under the guidance of those technically trained in the various arts and educational fields. The project's art teaching division, in assigning artists to this work, has established the basis for evaluating art work in relation to psychotherapy.

In the Psychiatric Children's Observation Ward, stress is placed on the specific value of art in its relation to the therapy of emotional and behavior disturbances in the children and an approach to its interpretation. Graphic art becomes a means of establishing contact with children who are not spontaneously expressive and of obtaining insight into the child's unconscious life.

A pencil and paper play with the repetition of abstraction or the simple forms probably gives mentally defective children considerable satisfaction to impulses for patterned activity; and experimentation and creation may often represent the beginning of integrated activity.

In the classes set up in the Children's Observation Ward by the WPA Federal Art project, particular significance was found in the different ways in which children's art work may be adapted to different forms of psychotherapy. There was even value in the group experiences "of observing other children drawing similar pictures or some picture which the individual child might not have the ability or courage to draw." The drawings may reveal the fantasies and unconscious life of the child, not only to himself, but to his psychiatrist who may thereby be guided to what psychotherapeutic methods may seem feasible in the individual case.

The types of children who come to the psychopathic ward are those who are maladjusted through organic defects, inherited brain disturbances, forms of sleeping sickness, falls in early infancy and those who have shown marked mental deficiency in their school work. These are given a test at the time of their entry, a test devised by Goodenough, which rates the child's mental age by the completeness of his drawing of the human form. Subnormality is gaged by the degree of completeness of the child's conception and coordination of motor action in drawing the human form.

There are also those whose home environment created psychotic difficulties. One child, whose father, a fine musician, was in prison for criminal acts and whose mother, an attorney with a Ph.D. degree, went mad when he was 4 years of age, was particularly difficult. In the beginning the formlessness of this child's drawings told little to either art teacher or psychiatrist. Later, when he expressed himself more fully in paint they were able to correct a number of his misconceptions. There was also a youngster, an objectionable genius, whose compulsions made it necessary for him to count steps, streets, windows, the number of minutes he has lived, will live and so on. This child's work reveals his counting compulsion in the infinite detail of his landscapes, with its many-windowed houses, branching streets and numerous sign posts.

There can be seen a marked similarity among the works of the schizophrenics, whose identifying characteristics are found in the number of hands and fingers they place on a figure or in their ability to completely dissociate themselves from the subject they were painting. Why is it important to have an artist work with the children rather than a teacher? it is asked. The artist's sympathy to this work, his ability to remain outside the scientific boundaries of the case and to offer his own fresh point of view makes him particularly valuable. The artist, unlike a regular pedagog, has no desire to make an artist out of the child patient or to force on him technical skill and esthetic achievement. The children accept him as a casual member of their group. He acts as their confidant and arbiter in discussions on art, life, politics, the weather, the hospital *(Continued on page 468)*

"The FAT OF THE LAND"

may be happy but they certainly aren't healthy, says
LEMUEL C. McGEE

THE JOVIALITY of the fat man renders him dear to his comrades. Mankind well may cherish this trait of good humor in the race, be it inherited or acquired. Hence, it is saddening to realize that many jolly fat beings must lose their lightheartedness to the ravages of their own excess weight. It is vexatious to learn of the frustrations and woe which the "fat of the land" bring on themselves.

Observation shows that there is a tendency to an increase in body weight for each succeeding decade of life. If kept to a minimum, this gain does not prove to be a serious handicap; yet it has been said that in general the most favorable weight is the one which has been attained at maturity. The inclination to gain weight, if unchecked during middle age, leads to an excessive accumulation of fat.

In deciding the question of the type of figure and the proper weight to maintain, what are some of the essentials to be considered? Heritage may furnish a guide to one's optimal weight. Some lineages tend to slender skeletal development and small volume of muscle and fat tissue. Other racial groups, having the same average height, are inclined to be heavier. Certain races have developed small individuals, either short and thin or short and thick. The individual cannot advisedly change his racial body form to any marked degree without impairment to his health. This is one reason why allowances are made both above and below the average stated weight for a person of given sex, age and height. True normality in weight is a zone on the figures of the scale. Only when the weight becomes obviously excessive is there occasion for considering the facts which have been gathered concerning fat men and women.

Why have physicians for the sake of the individual, and insurance companies for the sake of good risks, decried this excess weight? It is simply because fat people neither feel as well nor live as long as slender people. The actuality of a shorter life is well established from careful studies of large groups of fat people as compared to similar groups of average weight. The Actuarial Society of America has found that at age 55, 20 per cent overweight means 20 per cent

WHAT IS THE CAUSE OF MIDDLE-AGE OBESITY? IT SIMPLY COMES FROM EATING TOO MUCH FOOD!

higher mortality; at the same age, 40 per cent overweight brings 65 per cent higher mortality. This story is the sadder because the higher mortality can, presumably, be avoided.

Excess weight leads to crippled function of several essential organs of the body. This may be regarded as a premature wearing out of human tissues. The disorders, which result sooner or later, are known as the metabolic and degenerative diseases. Such a disease is diabetes mellitus. Many laymen know of this as "sugar diabetes." One of the best authorities has found that excess fat is the most important single cause of the disease. So close is the relationship that every man or woman who is obese is a potential diabetic patient. This means that the extra fat places such a burden on certain glands, notably the pancreas, that a large number of fat men and women will develop diabetes mellitus. Some of the obese persons die of other dieases before they have time to manifest diabetes. Which disease these people die of depends on what group of vital tissues perishes first from the strain of the extra weight. In long standing obesity there is an infiltration of fat into most of the body organs, particularly into the heart and blood vessels. In both of these places, the fat seriously hinders a vital function. For this reason, the death rate from circulatory disease is two and a half times as great in people overweight as in people with normal weight. Many of these needless deaths are associated

with high blood pressure, for this degeneration becomes more dangerous under the strain created by the fat.

The fat man and woman are unduly susceptible to diseases of the liver and gallbladder. For a long time the family doctor has observed the frequent occurrence of gallstones in those who are "fair, fat and forty." These stones in a diseased gallbladder, associated with infection and droplets of fat in the liver cells, lead to much dyspepsia in the middle aged and actually furnish victims to the "grim reaper" a decade too soon.

The obese suffer from heat excessively. On a hot day the effort required to perform the slightest work is painfully apparent in these individuals. They are less resistant to bacterial infections than is the man or woman of average weight. The risk to the life of a fat man requiring a major operation is alarming. The surgeon often finds his job impossible in the person with too much fat and must fold his hands in resignation when considering a patient he might otherwise aid.

The bony skeleton of the human body suffers from an overload it must bear in the corpulent man or woman. The arches of the feet give way to chronic flatfoot. The joints of the spine develop worn areas with a secondary growth of spurs of bone. Constant, persistent pain of the resulting arthritis is too great a price to pay for the indulgences leading to the unneeded fat in middle age.

What is the cause of middle-age obesity? It is overeating! Rarely is there an internal body disturbance that requires particular treatment. Some glandular dysfunction is the underlying cause of overweight in a few people; but these instances are exceedingly infrequent, and even then, the treatment includes a reduction in the number of calories taken in food. The source of all fat, ultimately, is food. Not only the amount but the kind of food eaten is the root of this evil of overweight. When food is taken in excess of the energy requirements of the body, the surplus is stored. Such storage has been compared to a bank account for surplus funds. The comparison ends after making the deposit; for surplus fat is hard to draw out and in many cases is left in the "bank" permanently.

For most of us, eating is a habit. One rarely goes without food sufficiently long to feel a true hunger pain. Civilized man has educated his reflexes to stimulate a desire for food. This is known as *appetite*. This trained desire is not an expression of the actual need of the body for food, true *hunger*, but rather is a cultivated response of the highly complicated nervous system of man. We refer to this as the habit of eating. An individual stomach is wont to receive certain volumes and types of food. If that food is fattening and is taken in large enough quantities, the person possessing the stomach must gain weight and will until the habit volume and type is corrected. The eating habits of youth usually parallel their growth and vigorous physical activity. These practices, continued from adolescence into adult life, where a high energy intake is not necessary, spell weight gain. Contrary to popular belief, mental work makes no difference in the energy requirements of the body. Physical exercise is the method of dissipating the fuel value of food.

Often the eating habit involves more than mealtime food. Afternoon bridge players are notoriously addicted to munching during the game. These extra feedings are mostly sweets, or some form of concentrated carbohydrates. The nervous tension of close games and difficult hands is expressed in the frequent reaching for, and vigorous chewing of, bonbons. What is said of the popular card game applies as well to other forms of pastime and sedentary occupations. Many obese individuals, as may be observed in those around one, may have emotional and unstable personalities; and during times of stress such persons obtain apparent relief from the strain by nibbling at food.

A fat man or woman is inclined to think that his food intake is no greater, often even less, than that of a thin member of the family eating at the same table. Usually the corpulent being is merely deceiving himself about this observation. In this regard, we may note with amusement the diner refusing a clear soup and oysters (a dozen will *(Continued on page 448)*

SO IMPORTANT IS THE CARE OF THE FEET OF A DIABETIC PERSON THAT SOME HOSPITALS HAVE ESTABLISHED SPECIAL DEPARTMENTS WHERE SUCH PATIENTS MAY BE TAUGHT THE PROPER CARE OF THEIR FEET.

DIABETIC GANGRENE

By SAUL S. SAMUELS

WITH the discovery of insulin in 1922 and its immediate acceptance by the medical profession all over the world, a new outlook on the treatment of diabetes was born. No longer was it necessary to put patients on diets as restricted and complicated as formerly, and no longer were they as frequently subject to the serious complication known as diabetic coma. As the use of insulin became more common, it was soon noticed that the lives of patients with diabetes were prolonged and that the average life expectancy of the diabetic patient was considerably increased. While this was highly advantageous, it also had its drawbacks and disadvantages. In other words, while insulin kept the patient alive longer, it also allowed the patient to live long enough to develop other conditions more troublesome and more serious. It is about one of these complications of diabetes that I wish to write, namely arteriosclerosis, or hardening of the arteries.

In a normal individual the blood circulates through the lower extremities in such a well regulated fashion that the temperature, color and function of the legs and feet remain adequate throughout the patient's life. As one reaches the age of 35, certain changes may take place in the arteries of the legs and feet which are the natural expression of the aging process. This condition is known as arteriosclerosis, or hardening of the arteries. When speaking of it in connection with the diabetic patient it should not be confused with what is popularly known as hardening of the arteries. In the nondiabetic, it is a generalized arteriosclerosis, which involves other parts of the body such as the heart, kidneys and brain. In this particular discussion, attention will be focused

on that form of hardening of the arteries which affects the lower extremities of the diabetic only.

It has been known for a long time that hardening of the arteries is a frequent accompaniment of diabetes. This is especially true in the middle-aged person whose diabetes has not been properly treated over a long period of years. In these patients, the tendency to develop hardening of the arteries is greater than in the average person. This being the case, it is at once clear that the ordinary development of hardening of the arteries as a result of age can be considerably hastened and intensified in the diabetic patient who is not being properly controlled. Furthermore, the fact that the diabetic patient lives longer since the use of insulin gives rise to the present increasing number of cases of arteriosclerosis in diabetics. While it is true that the patient with this hardening of the arteries, either with or without diabetes, may live to a ripe old age and show no symptoms or disabilities of any kind as the result of his arteriosclerosis, it is also true that serious consequences may result if the arteriosclerosis is combined with some condition that interferes with the proper flow of blood through the sclerotic or hardened arteries.

A good analogy of the process of arteriosclerosis in the lower extremities is possible by comparing the arteries of the legs to water pipes in the house. Such pipes cause no trouble until the flow of water through them is blocked by corrosion or rust formation. When such a condition arises, the pressure of water in the faucets at the top of the house is usually low, and in some cases no water may be obtained at all. The same is true of the arteries in the legs. Everything functions properly as long as the flow of blood through these vessels is unhindered. But, with the development of some obstruction in the arteries, the supply of blood to the feet and toes becomes less and less, resulting in serious consequences if something is not done about it. In the diabetic patient, the greatest danger of hardening of the arteries arises in the lower extremities. It is here that the dangerous effects of arteriosclerosis are usually found.

Trouble may arise in one or two ways. The first and most common is the result of infection in various parts of the feet. These infections are usually started by the careless or ignorant diabetic patient, who does not know of the danger arising from an apparently trivial injury to the foot. When infection has developed in a diabetic patient's foot, particularly if he is over 30, it may seriously interfere with the blood supply by pressure from the swollen tissues and thereby cause the condition known as diabetic gangrene. Gangrene simply means dead tissue produced as a result of interference with its blood supply. This may arise by tying a string or tourniquet tightly around a toe or finger and leaving it there for a few hours, or it may occur as a result of an internal blockade, such as is found when a blood clot develops in an artery or when an artery becomes so thickened that there is no room left for the flow of blood.

The most common methods of starting an infection in the legs or feet are, first, the attempted removal of a corn or callosity by the patient who uses a razor blade or some other unsterile instrument for this purpose. Many a leg has been sacrificed and many a life lost through this dangerous practice of tinkering with the toes. This is particularly true of elderly people whose eyesight and skill are not of the best and who resort to many peculiar methods of removing corns, callus growths and of treating so-called ingrown toenails. Any treatment that may be required should be performed by an expert chiropodist, by the physician or by some member of the family who has been instructed properly.

Second, attempts to remove a so-called ingrown toenail by digging into the corners of the big toe with unsterile scissors have caused untold numbers of legs to be lost. As a matter of fact, most of these cases have not been ingrown toenails. The pain in the corner of the big toe, which the patient diagnoses as ingrown toenail, is however a common symptom of poor circulation in the foot, having no connection whatever with ingrown toenails. Therefore, any treatment to relieve this pain must be directed to the poor circulation rather than to the exploration of a so-called ingrowing nail.

Third, the application of various commercial corn removers and plasters causes injury to the delicate tissues of these feet. Most of these commercial corn removers contain as their active ingredient salicylic acid, which destroys skin rapidly. The danger for the diabetic patient lies in the fact that the action of the salicylic acid may be unchecked and may destroy not only the corn or callus growth but the healthy skin as well, thus opening a pathway for serious infection and possible gangrene.

Fourth, "athlete's foot" or ringworm infection between the toes is a common condition that affects a large percentage of the adult population. The danger for the diabetic patient lies not so much in the presence of the ringworm

infection as in the fact that this condition often produces cracks between the toes, through which other and more serious germs may enter the tissues. Therefore, for the diabetic patient who has "athlete's foot," prevention of the secondary infection is most important. This can be accomplished, as a rule, by the daily application of nonirritating antiseptics, such as mercurochrome or weak iodine solution. Mercurochrome is preferable because of less chance of burning the tissues. Any of these causes may be the starting point of serious infection in the diabetic patient with arteriosclerosis. The gangrene which follows therefrom may necessitate amputation of a leg or even a fatal outcome as a result of an overwhelming infection of the blood. Prevention of these two results is so simple that the diabetic patient cannot be warned too strongly or too often of the terrible consequences of carelessness or neglect. So important is this point in the treatment of diabetic patients that some hospitals have established special departments with competent chiropodists in charge, where patients may be taught the proper care of their feet.

Another form of diabetic gangrene is that usually seen in older individuals in whom the arteriosclerosis has advanced much farther. In this type of case, infection is not as serious nor as intense; but such a patient is in danger because of the fact that the arteries have been so blocked by the arteriosclerotic process that sufficient blood does not reach the toes and other portions of the feet to maintain them in a healthy condition. These patients receive warning of the presence of such poor circulation in their legs by various symptoms and signals fortunately provided by nature. One of the most common of these warning signals is the feeling of tiredness in the calves of one or both legs, which arises when the individual walks one or two blocks. This tired feeling may be so severe that it is felt as an actual pain or cramp in the muscles. The patient must actually stop walking and rest for a minute or two before he is able to proceed. Other warning signals are an unusual coldness of a foot or of the toes, a numb feeling of the toes, a tingling or even a burning sensation in various parts of the foot. Pains in the arch are also common. Any of these symptoms that are noticed only when the patient walks in the street should not be neglected; they should be called to the physician's attention immediately and the condition of the blood circulation in the legs investigated.

Within the past ten years the medical profession has been so interested in the subject of circulation in the extremities that almost any physician is capable today of diagnosing poor circulation by simple methods and machines so that proper treatment can be started at once. Great progress has been made in the treatment of poor circulation in the limbs within the past few years. Formerly such patients with hardening of the arteries of the extremities were considered victims of a condition impossible to treat and were regarded as hopeless; the physician felt that these unfortunate persons would either be disabled for life or would eventually lose one or both legs. Such an attitude is no longer justifiable. Increased experience with the treatment of these conditions has proved beyond a doubt that much can be accomplished toward improving the circulation in the extremities so that not only may the patient's symptoms be relieved considerably, but the danger of the development of gangrene may be reduced. In this type of case where the condition is primarily one of poor circulation, it is necessary that the diabetic patient realize that since the circulation in the legs is so delicate everything possible must be done to maintain or improve it and avoid all things that might harm it. For instance, it is necessary that such a patient keep the feet as warm as possible at all times. In winter, it is necessary that the patient wear soft wool socks or stockings, even in bed if necessary. In this connection it is important to emphasize the fact that cold feet should not be treated by the use of hot water bottles, bags or electric heating pads or baking lamps of any type whatever. More damage has been caused by the use of external heat applied to the feet of diabetic patients than is realized. Regardless of how weak the source of heat may apparently be, the danger of such treatment is too great to consider any kind of external heat. Not only is the circulation poor but the ability of the patient to feel the effects of heat through the lower extremities is greatly diminished. Consequently, what might appear to be safe is really a dangerous method. If the patient's feet are cold, a warm bath for ten or fifteen minutes is much more effective and much safer than the use of a baking lamp, a hot water bottle or an electric heating pad.

When the physician has made a diagnosis of poor circulation in the diabetic patient, the prompt institution of proper treatment is necessary. The purpose of this treatment is to build up additional circulation in the legs, which is known as collateral circulation. There are many methods available today to the attending physician, depending on the type of case under consideration. The major responsibility, however, rests with the patient *(Continued on page 447)*

The DOCTOR ROUND THE CORNER

By REGINA J. WOODY

He thought he knew it all. In fact, he never admitted the possibility that Doc Hardy might be right when he told him to stay close to civilization. So "F. B." set out for the Maine woods. Tragedy lurked near there, as he was to learn; but good fortune also lived in a cabin nearby

JUST as the black bass struck, F. B. Jamison felt the pain, the old familiar pain in his heart and chest. From the pull on his line he knew it was the biggest fish he'd ever hooked. He shut his lips together. So Doc Hardy had been right, after all, drat his hide. But F. B. was fishing, and he always finished what he started. He could feel his face getting hot. Very likely he looked like a nice ripe tomato, but no one noticed. There wasn't any one to notice anything up here in the Maine woods; and if Big Jim, the guide, who was rowing, ever did notice anything, he never spoke of it. The pain was worse now; it was gnawing and sending out fiery fingers which seemed to tear

BETWEEN THEM THEY BROUGHT THE PUDGY, HARD BREATHING, SUNSET-HUED F. B. INTO THE ROUGH LOG CABIN BY THE LAKE AND LAID HIM DOWN.

him to pieces. F. B. could hardly breathe. He choked, agonized and terrified.

"Jim," he murmured, his voice a husky breath, "take her," and just as the guide, amazed and astonished, took the line from him, F. B. slumped to one side and gasping in sheer agony, forgot the fish on the end of the line in his fear of instant death.

"You sick?" Big Jim was reeling in expertly. "Big 'un," he announced laconically, gaffing it neatly and laying it gently in the bottom of the boat before he surveyed F. B.

"I'm dying," F. B. muttered. "Get me to a good doctor."

"Fine feller down here a piece," Big Jim volunteered; but the combined groan and snort which F. B. emitted was so caustic, so unusual a sound, that Big Jim did not look at him for a moment.

"I have to have a specialist," growled F. B. impatiently. "I'm a very sick man." This speech left him gasping from a new paroxysm.

"Country folks git pretty sick, too." Big Jim stared at F. B. disapprovingly. "You gotta have a doctor quick."

"I don't want a bungling yokel of a village barber," snapped F. B. "Get me to the landing, hire an ambulance. I've got to get back to civilization where the doctors know something."

"Yeah?" Big Jim looked as skeptical and as unconvinced as only a Maine guide can look; but he pulled out the oars and began to row swiftly. F. B. was slumped down now, his eyes shut; but he moved as much as he could in the

space at his disposal. If his eyes hadn't been shut, he'd have seen that he was going away from the landing rather than toward it. As it was, he only groaned and cursed and meditated heatedly on the amazing and incredibly indigestible realization that the company doctor had been right. Exertion had brought on a heart attack. Why hadn't Doc Hardy told him to stay near cities and towns boasting good heart specialists and fine hospitals, instead of bleating that "the nearest doctor is the best doctor." Here he was, a full 70 miles from even a town of 30,000 inhabitants, and nothing but country hick medics to look after him. F. B. thought as long as he could think. Indeed, he thought until his whole brain seemed to burn in fiery pain along with his overburdened heart; and then he gave up the struggle and slumped in unconsciousness. When Big Jim swung broadside to the plank wharf of Dr. Simon Gray, F. B. knew nothing about it. The doctor himself was sorting dry flies, with dirty white canvas hat on the back of his sandy hair, dungarees rolled up, and dressed in a rough blue flannel shirt; he would not have been a reassuring figure to F. B. nor to any other well-to-do city dweller, even if F. B. had seen him.

"Hi," said Jim.

"Hi," said the doc, stepping forward and looking at F. B., "Looks kinda peaked. Gimme a hand." And between them they brought the pudgy, hard breathing, sunset-hued F. B. into the rough log cabin by the edge of the lake and laid him on a bed. Dr. Gray got out a stethoscope. F. B. didn't have a collar or even a belt on. He wore only a bathing suit and loose khaki trousers; so there was nothing to unbutton or unbuckle.

Dr. Gray listened a while, pursed his lips and said, "That was a close call." Then he opened his worn leather bag. On the wood stove he sterilized his hypodermic needle. When he jabbed it into F. B.'s arm, F. B. awoke and announced he wanted a good doctor, not a country bumpkin.

"Sure, sure," the doctor soothed, one eyebrow raised, winking at Big Jim. "We'll get you right into the city, right to a big hospital." Until the drug took effect Dr. Gray sat with anxious finger on F. B.'s pulse. Twenty minutes later he beckoned Big Jim out onto the porch in answer to three quick shots of a rifle.

"Mrs. Calloran," the doctor murmured. "She's looking for quints, but the best she'll do this time is twins, I tell her. Keep an eye on your boarder. I'll be back in a couple of hours. Don't let him move a muscle. If he even tries to turn over, shoot this into him," and he handed Big Jim the needle.

"But you said you'd get him right to the city—"

"One bump more, and he'd be a stiff," the doctor snapped. "I'll be back quick's I can; he's going to take some nursing."

"O. K., Doc, but what if he wants to go places?"

"Heck!" the doctor rammed tobacco angrily into his old pipe. "Haven't you any imagination? Wiggle the mattress. Say 'choo, choo.' Tell him he's on a train. He'll be so groggy he'll believe you."

"Aw doc," Big Jim didn't know whether the doc was ribbing him or not; but he sat down

WHEN THE DOCTOR GAVE HIM HIS ITEMIZED BILL, HE READ IT OVER AND OVER BEFORE LIGHT DAWNED ON HIM.

obediently by F. B., and when F. B. muttered he wanted to go places, Big Jim shook the mattress and said they were in a train. But he couldn't bring himself to make a noise like a train. That was kid stuff for certain.

It was after midnight when the doctor got back. He poured himself a glass of buttermilk and, munching one of the doughnuts Mrs. Calloran had been frying when she was taken with her pains, announced cheerfully, "Well, she was one up on me; they've got triplets."

"Wa'al now," Jim drawled.

"Turn in," ordered the doctor. "I'll wake you at 5."

"Sure, you need the sleep."

"Sleep," the doctor snorted, "I came up here to fish, and I'm going to fish."

"Oke." Big Jim accepted this as final.

Two days later a very grateful F. B. was eating a breakfast of fried black bass and flapjacks and drinking fragrant coffee on the veranda of Dr. Gray's cabin. The doctor and he had been fishing that morning.

"I have to thank you for taking care of me and ask you for your bill."

"Sure," the doc smiled. "I'll hand it to you soon's we get to Sargentville. Ready to go?" F. B. was. He wiped his lips and pondered the bill. Soak him likely fifty—maybe even seventy-five dollars! The doctor had been up with him twenty-four hours; F. B. had lain in bed another twelve; the doctor had fed, bathed and waited on him. F. B. fretted and fumed. He kind of hated to be held up; but then country folks always played the city fellow for a sucker.

When the old Chevvy clattered up to the barn of a tidy white farm house, small, neat and stiff behind its brilliant bed of red geraniums, F. B. knew he'd be soaked.

Once inside, F. B. was left in a dim, chill, much varnished parlor with a small hand organ, a lamp with enormous roses of a horrible shade of magenta on it, and a rag carpet of brisk reds and yellows. The only thing to read was the Bible and a mail order catalogue. Across the way the waiting room was full. The doctor seemed to have forgotten him. F. B. fidgeted, but it availed him nothing. One by one the other patients went in and came out. The doctor was genial and kindly. Every one seemed to like him. It was just noon when Dr. Gray came back.

"I wanted you to have dinner with me," he said pleasantly. "Your train goes at 3:10. We've plenty of time."

F. B. swallowed his annoyance at being further indebted to the doctor, but fifteen minutes later he was glad he'd swallowed it. It was the best dinner of his vacation. There was fish chowder, rich and tasty. There was boiled salmon swimming in cream, and new potatoes and peas and fresh corn. There were biscuits, hot and light, two inches high, and dessert was blueberry pie with thick whipped cream. Boy, oh, boy, what a meal!

"I want you to lie down till train time," the doctor said. F. B. finished the delicious coffee and sighed. It didn't matter much to him now what the doctor charged. That dinner alone was worth it.

On the bed, at a dreadful disadvantage, the patchwork quilt pulled up to his nose, F. B. again inquired for his bill.

"Two fifty," the doctor said calmly.

Pretty steep for two days' care, F. B. reflected, but well, that's what you got when you were on vacation. Every one soaked you.

"I haven't that much on me," he said. "I'll give you a check. Will you give me a receipted, itemized bill?"

"Certainly," Dr. Gray looked astonished but went over to the desk near the window. F. B. sat up in bed and laboriously wrote a check for $250. He gave it to the doctor when the doctor proffered the receipted bill. Both men swore simultaneously, but it was F. B. who began to guffaw first. He read the itemized bill over and over as he shook with laughter. It read:

1 office visit.....	.50 cents
2 days' board @ $1.00 per day.....	$2.00
Total	$2.50

The doctor solemnly handed the check back.

"Keep it," spluttered F. B., "and get some kind of office equipment that'll help the folks 'round here. Hospitalize a kid who needs it and can't afford it."

"Thank you," the doctor put out his hand.

F. B. gripped it. "Can I come back next year?" he asked.

"As often as you like, if you don't think you're too far from a good doctor for safety," grinned Dr. Gray.

"I've never been so near one before!" F. B. choked. He wasn't used to being so emotional.

"What was your college?" he asked gruffly, to cover his confusion. Dr. Gray smiled.

"I was Harvard Medical 1912. I graduated from college the year after you."

"Oh, my gosh!" F. B. was taken aback. "No wonder," he said.

"No wonder!" The doctor smiled, and as he turned away F. B. saw dangling from the doctor's watch chain a Phi Beta Kappa key like the one he'd so nearly won himself.

AN *Infant* INDUSTRY GROWS UP

By **ELIZABETH DOBSON**

THE INEVITABLE daily diaper wash, always rated as baby's drawback number one, is rapidly being converted into a respected and remunerative business. One Chicago firm alone during the past eight years has relieved 45,000 mothers of this tedious task. Its manager estimates that during that period some 17 million hours, or about 2,000 years of diaper washing have been saved for these mothers. For the babies concerned there has been an abundant supply of soft, sterile diapers constantly at hand.

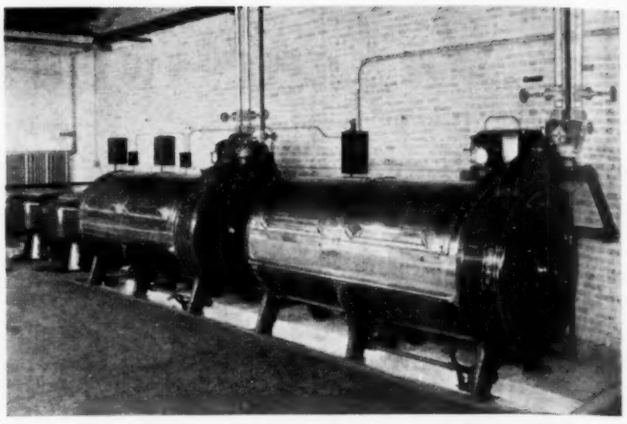
Back in 1931, when this enterprising business man started his diaper washing service in an attempt to beat the depression, he had only seven customers. Now, in a large plant devoted exclusively to the service, 60,000 diapers are washed, rinsed, dried and folded daily. There are fifty-seven employees, and twelve trucks are required to make deliveries.

So popular is the commercial diaper service that approximately fifty firms are now operating in the larger cities. A diaper wash business in Philadelphia, started on the proverbial shoestring several years ago by two young men fresh out of college, is paying handsome dividends. One New York firm reports 8,000 customers at the present time. Among other cities in which diaper service is now available are Boston, Baltimore, Washington, D. C., Buffalo, Detroit, Minneapolis, Pittsburgh, Kansas City, Mo., Denver and San Francisco.

Once a mother realizes that baby is not harmed, but actually benefited, by the service, she is delighted to delegate her diaper wash-

ONE COMPANY HAS SAVED 2,000 YEARS OF DIAPER WASHING FOR MOTHERS IN THE PAST EIGHT YEARS.

Janet Hart



AT RIGHT ARE TWO OF THE HUGE METAL WASHERS INTO WHICH THE DIAPERS ARE PLUNGED FOR WASHING AND STERILIZING. IN ADDITION TO THE USE OF FORMULAS TO DESTROY BACTERIA, ONE STEP IN THE WASHING PROCESS RIDS THE GARMENTS OF LIME, SOAP AND OTHER RESIDUE.

ing to a scientifically operated plant, which for a reasonable sum furnishes a fresh supply of sterilized diapers two, three or four times a week.

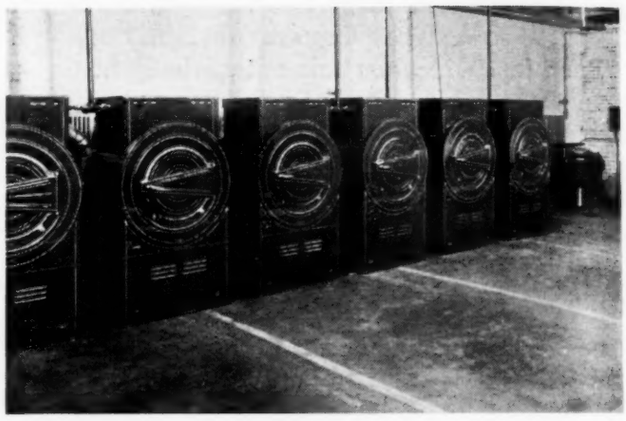
As a rule the clean garments are delivered in an airtight metal container, which then serves as a convenient receptacle for the soiled ones. In some plants the diapers are placed in clean waxed paper bags before going into the container. In others they are wrapped in Cellophane for delivery. All containers are carefully sterilized before the fresh diapers are placed in them.

Prompt delivery is one of the fundamentals of the service. Baby must have his most essential apparel without fail, and the shining paneled trucks with their smartly uniformed drivers can be depended on to arrive right on schedule.

The most modern equipment and scientific methods are used for the various washing and sterilizing processes in the up-to-date diaper plant. Many firms invite inspection. A recent visit to a plant of this kind disclosed that when the soiled diapers are brought into the plant they are emptied directly into huge metal washers. They are then washed, sterilized and rinsed numerous times in soft filtered water. In all there are eleven different operations. In addition to the use of formulas to destroy bacteria, one step in the washing process rids the garments of lime, soap and other residue. Diaper rash is practically unknown among babies for whom they are used.

The diapers are dried in hot air at 180 F., another safeguard against harmful bacteria. During all operations they are untouched by human hands. They are not ironed but are smoothed, folded and sorted by white-gloved female employees. Always there is constant supervision for baby's protection. When the garments are ready for delivery they are softer, whiter and fluffier than if they had been laboriously laundered at home.

Just how much safer are the commercially laundered diapers is shown by figures available from the American Institute of Laundering. In an investigation of washing methods used in private homes it was found that after the cold rinse or soak, hot suds and three rinses usually employed, the average count of bacteria per cubic centimeter of wash water was 168,388, as



THESE ARE THE DRIERS FOR THE DIAPERS. THE TEMPERATURE INSIDE THEM IS KEPT AT 180 DEGREES.

compared to absolute zero in bacterial count when the commercial diaper formulas were used.

Nor is the baby customer obliged to wear the same diapers that other infants use. When his mother orders the service, a supply of new, excellent quality garments sufficient for his needs is assigned to him. They are individually marked and registered so that during his "diaper life" they are used exclusively by him.

Furthermore, the service seems to help preserve his right to clean diapers when he needs them. With a fresh supply always at hand mothers don't feel such an urge to "cheat" by merely rinsing the diaper and drying and using it again, as so frequently happens when she must do the washing.

Certainly the service effects a saving of time and strength for the mother when both are at a premium. Usually it means that at least one more precious hour each day is available for resting, for other work or for companionship and enjoyment of other members of the family.

Frequently diaper service represents the difference between the mother doing her own work or being obliged to keep a maid or nurse while baby is small. Charges range from $1.20 to $1.35 a week for 12 diapers a day, to $2 a week

for 24 a day. If the mother furnishes the diapers, the cost is slightly less. For even the most exacting baby the charges are not exhorbitant, when the saving of soap, water, gas and electricity are considered, not to mention the initial expense of the diapers.

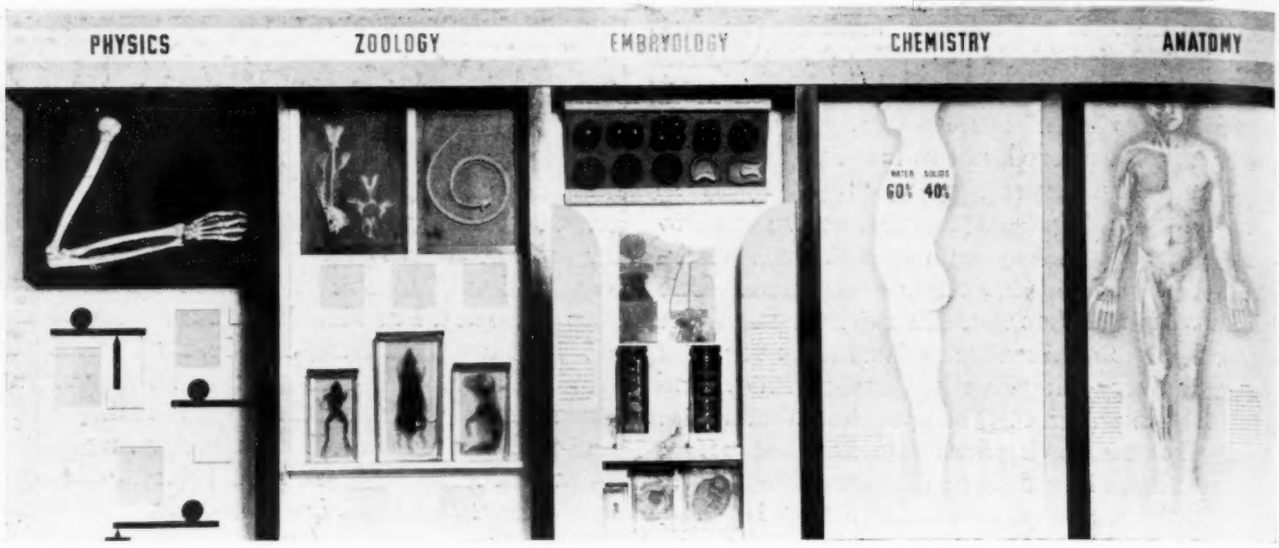
In addition to plants devoted exclusively to diaper washing, many laundries are now offering specialized service on infants' wear. One pioneer firm in Los Angeles offers a choice of several plans of service, such as the unlimited daily or every-other-day bundle for everything the baby uses, or certain specified items only. Each of these services are at a flat rate. Here the individual bundle is handled from beginning to end entirely separate from all other work going through the plant. Included among the customers are many large hospitals in the Los Angeles area.

"Baby's Own Service," as developed in the American Institute Laundry, allows the customer to include along with the diapers the infant's white cottons, such as sheets and garments, at an extra charge of 25 cents a week.

So rapidly is this infant industry assuming gigantic proportions that in the near future, even in smaller cities and towns, mothers may be able to order laundry service for baby's clothing, including his unmentionables, just as they do for other family washing.

THE CLEAN DIAPERS ARE FOLDED AND SORTED BY WOMEN WEARING FRESH WHITE GLOVES. THEN THEY ARE PACKED AWAY IN CANS READY FOR DELIVERY.

THE GARMENTS ARE PLACED IN CAREFULLY STERILIZED, AIRTIGHT METAL CONTAINERS AND LABELED FOR DELIVERY.



MEDICAL EDUCATION, or how a doctor learns to be a doctor, is the general subject of the American Medical Association's exhibit at the New York World's Fair. Small dioramas and mechanical models illustrate the basic sciences which the medical student must study early in his career; these include physics, chemistry, zoology, embryology, anatomy, histology, bacteriology, pathology, physiology and pharmacology. One phase of each of these is shown just as the visitors to the fair will see them.

To the average person, these terms are merely medical lingo, hard to pronounce, harder yet to understand. This display attempts to simplify these branches of knowledge, so that Mr. Average Man can comprehend the vastness of the field of medicine, which his family doctor has at his fingertips.

Physics **(1) is the study of the laws of nature in regard to forces and general properties of living forms; for instance, as shown in the diagram, there are three kinds of levers for the release of motion, all of which are found in the human body. The elbow is a good example of one kind of lever.**

Zoology **(2) is the science of what is known about animal life—from the lowest, or one celled, form to the highest, or human, form of life.**

Embryology **(3) is the complete study of all embryos of life. As shown in the display, an embryo is the rudimentary form of anything in its earliest developmental stage.**

Chemistry **(4) treats of the elements and atoms in organic and inorganic matter.**

Anatomy **(5) concerns the structure of the body, human or animal.**

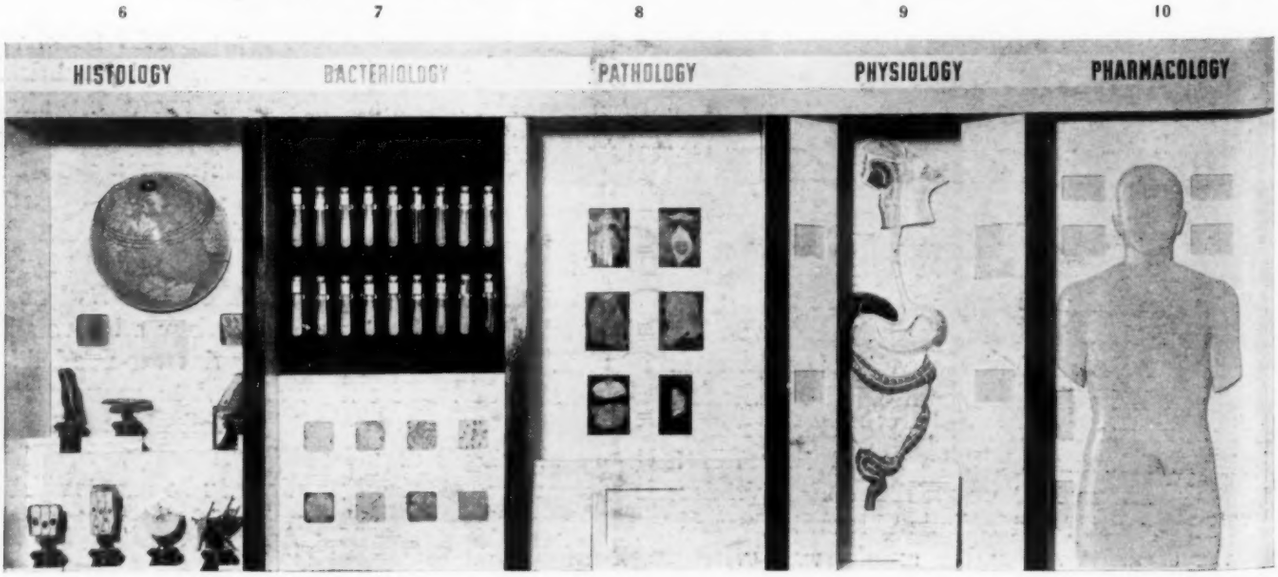
Histology **(6) is the sum of knowledge regarding the delicate structure and composition of tissues. In the display, diagrammatic cross-sections are shown of the mucous membrane of the digestive tract, the trachea or windpipe, the bone, the nerve cell and muscle fiber.**

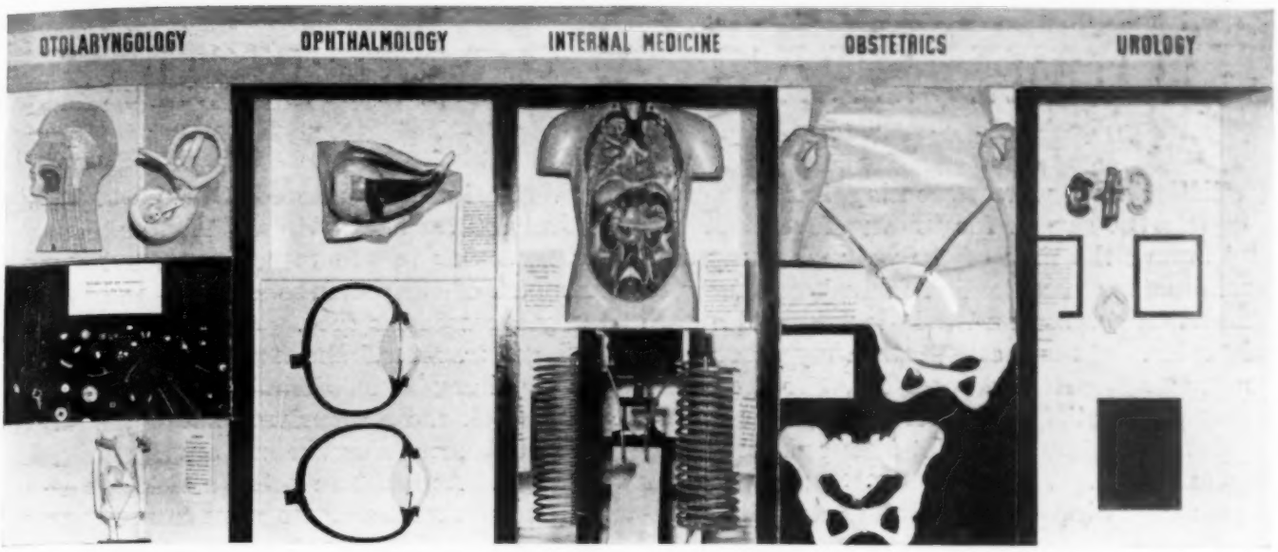
Bacteriology **(7) is the study of the life and habits of bacteria, or germs.**

Pathology **(8) is that branch of medicine which treats of the exact nature of disease—what happens to you and why. The display shows how various types of tumors appear.**

Physiology **(9) contributes facts on the functions of the body and its parts.**

Pharmacology **(10) is the sum of knowledge on the use of drugs in the human body.**





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Besides lectures, classroom and laboratory work on the basic sciences, the medical student must equip himself with practical experience in the clinic and hospital. Some of the branches of medical learning which he then invades, either temporarily or permanently, are the subjects of the displays 11 to 20.

Otolaryngology **(11) is the specialty which studies and treats only the ear, throat, pharynx, nasopharynx and trachea, or windpipe. A group of pins, buttons, keys, bones and paper clips, which have been extracted from people's throats, are shown in the exhibit.**

Ophthalmology **(12) is the sum of knowledge about the eye and its diseases.**

Internal medicine **(13) is that department of medicine which deals with diseases that cannot be treated surgically.**

Obstetrics **(14) is that branch of medicine which deals with the management of pregnancy, labor and childbirth.**

Urology **(15) is the study of conditions of the urine and urinary tract both of men and women.**

Dermatology **(16) is the sum of what is known concerning the skin and its diseases.**

Orthopedics **(17) is the correction of deformities and the treatment of chronic diseases of the joints and spine. An orthopedist is not merely a specialist in treatment of foot disorders, as often thought, unless they are derived from deformities or disease of the joints.**

Surgery **(18) is one of the triumphs of modern medicine. Through the benefits of surgical operations, man has added many years to his life. In the upper part of the display a group of surgeons are shown hovering about an operating table; below are depicted the steps of progress in the healing of a surgical wound.**

Neurology **(19) is the sum of knowledge regarding the nervous system, both normal and diseased. The exhibit shows the location of part of the nervous system.**

Pediatrics **(20) is the specialty which studies and treats the diseases of children.**

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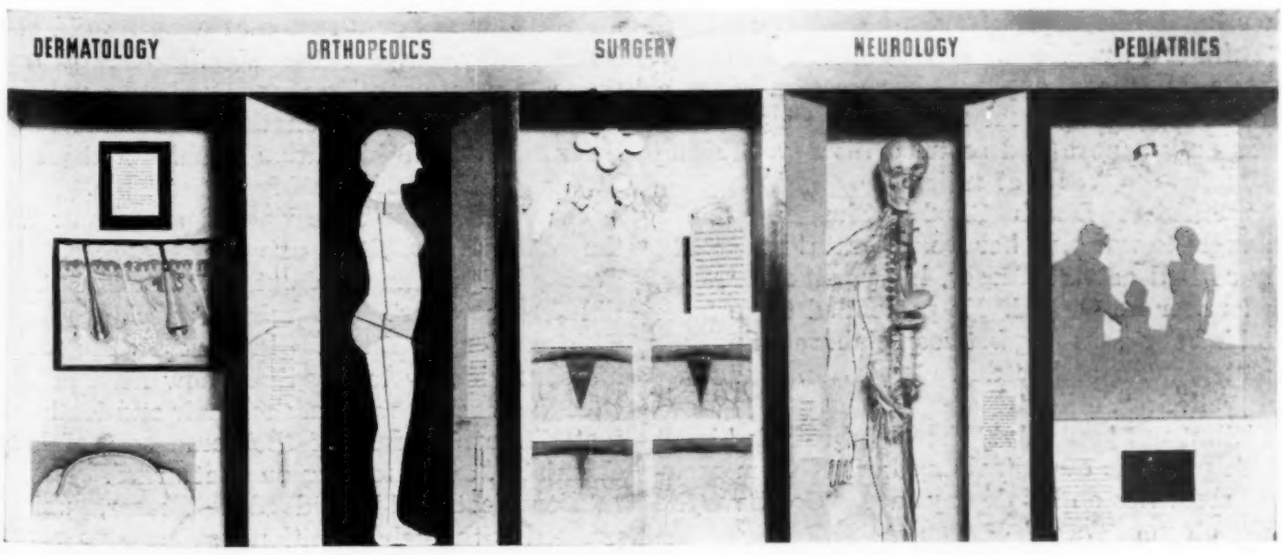


JUDITH STARTS SOMETHING—

THE DAYS were becoming balmy, and it was the season for "spring fever." It was almost the time of the year when my own grandmother used to sigh for a "good mess of dandelion greens" and tell me I needed a dose of "sulfur 'n' molasses" to thin my blood! No longer would salt pork, potatoes, corn bread and gravy quite satisfy the inner cravings for a more varied and vitaminous diet of our simple country existence. This was the kind of weather which might have caused Judith Answith's languid irritability, except her trouble was more ephemeral than that.

I had no opportunity as handy man to the Answith family for a searching analysis of Judith's mood. The unsympathetic attitude of the other children and the studied indifference of Dr. and Mrs. Answith was, perhaps, the better for her.

"Hélas, mon petit porc avec des haricôts!" sighed old Sock, perpetrating his newly acquired and very bad French on Judith. "Has Clark Gable or Robert Taylor twanged a sour note in your palpitating bosom?" he queried.

She would have been insulted greatly had she known he was calling her "Little Pork with the Beans." She ignored him and the fact that pet names of 50 million discerning Frenchmen may not bear impolite literal Anglo-Saxon translation. "Or," he speculated, "is it that you detect technical errors in the cinematic conduct of Eleanor Powell or Ginger Rogers? There must be a cause for as bad a case as you have. 'Tain't right!" His eyes were glittering from his penetrating brilliance of mind.

But Judith continued to sit. Her chin was on her hand like a pink and white statue of the "Thinker" by Rodin. Her brother's badinage made no more apparent impression than a snowflake on the real statue. He suspected it was only a pose and so tried his never-failing stimulus for "cases of sulks."

"Cluckless Dumb Cluck! She hasn't one thought to warm up her frozen brain!" He could be as bad as Old Teaser, his younger brother, whenever he wished. He pretended to go back to his book-worming between elaborate impertinent glances at her down his nose. Suddenly he yelled: "Smile!"

"Shut up, you silly!" the Dumb Cluck hissed with pretense of restraining herself from making scratches on his downy face. "Go shave the fuzz off your face!"

"Wha- huh!" sputtered Old Sock, thrown entirely off the track. He was 17, you know, and his face was in the rather neglected state of fuzziness of early manhood. His hand involuntarily caressed his face.

"I got troubles," she flared, "but I wouldn't have so many if you'd mind your own business."

Old Sock had a surprised look on his face for several minutes after she had angrily quitted his presence. At last he started a sickly sneer but halted it half frozen. He went to a mirror and screwed his face into horrid grimaces as he inspected the acreage and yield of his crop of whiskers. Evidently he was neither well pleased nor hopeful about the landscape, for he shaved later with his father's razor.

At dinner that evening I noticed that Judith inspected Old Sock's face and smiled covertly. She was still silent but obviously in a much happier frame of mind. Old Sock was just a bit too brilliant with his conversational efforts. Occasionally, he would pause and absentmindedly rub a caressing finger on his cheek in front of his right ear. I knew what that meant. He was feeling the stubble of a few stiff beard hairs surrounded by a vast expanse of smooth skin. From then on, Old Sock would make secret daily calculations, with the care of an astronomer discovering a new star, as to when it would be safe for his vanity to start cultivating a pair of Argentinian Burnsides.

It amused me: Judith, urging herself on to be a grand movie star; Old Sock, straining to outdo a movie gigolo for brush on the face.

Only once during the unusually peaceful meal did Judith make a sly dig at her older brother. So veiled was her thrust that even he did not immediately suspect the significance of her request for information regarding books on hair, false whiskers and such things. As the slow flush mounted to his ears, she snickered just a little and excused herself from the table.

Then little Claribelle wanted some hair for the cosmetic benefit of one of her dollies. Old Teaser did not know about hair books, but he did know where one might purchase false whiskers for detectives. Old Sock tried to cover his confusion by telling them how little difference there really was between hair and feathers, just different forms of the same sort of biochemistry, or something on that order.

"Horsefeathers!" said Old Teaser, unimpressed with such erudition.

By **PHILIP JARED**

EVIDENTLY HE WAS NEITHER WELL PLEASED NOR HOPEFUL ABOUT HIS LANDSCAPE, FOR HE SHAVED LATER WITH HIS FATHER'S RAZOR.

"I don't want feathers where my hair grows," protested little Claribelle, missing the point entirely, as a 7 year old might.

"They are all made of horn, whether you kids believe it or not," declared Old Sock.

"Huh-uh!" objected Old Teaser, remembering the persistent muskiness of a rhinoceros horn he had once examined. "They don't smell the same."

"Is that so, young sprout!" insisted Old Sock. "Well, just try burning them, and your nose'll tell you what your brain doesn't know."

"Don't want to," replied Old Teaser with irritating indifference. "Birds couldn't fly with hairs on their wings."

"Bats do," snapped Old Sock impatiently.

"You got bats in your belfry," parried Old Teaser. "Bats don't have horns on their wings."

"Quiet, infant!" Old Sock's dignity was insecure. "They have horns on their toes, the same as you have." He really meant that the toenails and claws were composed of keratin.

"I saw a picture of the Bad Man," piped up Claribelle. "He had horns on his head, didn't he, Mamma?"

FROM ALL INDICATIONS, OLD SOCK WAS DESTINED TO BECOME A DERMATOLOGIST, A SKIN SPECIALIST. HE CERTAINLY SPENT ENOUGH HOURS STUDYING THE EPIDERMIS.

And while Mrs. Answith was explaining about the Devil's horns, Old Sock slunk away from the battle of wits with his antagonistic brother. He retired to his father's library to do a little "brain dusting" on the subject of "Appendages of the Skin." In other words, he wanted to learn more about hair, nails, feathers, claws and horns with especial reference to the barba, the hair of *his* beard.

And thus the struggle for egoistic superiority continued for several days between Old Sock and Judith. He was voluble, she almost silently biding her time.

I knew from previous experience I might practice a little espionage and learn something from her wastebasket occasionally, for she spent most of her spare time in her room "doing some work." Once before she had accepted one of Old Sock's challenges and had written a prize play which had received amateur filming. That had also gained her the opportunity to do some silent acting because the movie had not been a talkie. So I was on the alert whenever I incinerated the contents of that interesting wastebasket. I expected almost anything to happen. But she must have suspected me; no clues came out of that wastebasket.

From all the indications, Old Sock was irremedially destined to become a dermatologist, a skin specialist. He certainly spent enough hours studying the epidermis. The Answith "natives" soon learned that "derma" meant skin. Old Teaser was dubbed "Little Pachy" because of his elephantine antics about the home and because he had a "very thick hide," meaning of course, his imperviousness to criticism and household instructions concerning the sanctity of the peace of mind of his associates. Judith was no longer the Dumb Cluck but had a name coined especially for her, Miss Leptoderma. This cognomen was not the most complimentary Greek, but it did convey the idea that Judith had the thinnest of skins and that she was most "touchy."

Now with a situation like that developing within the bosom of any man's family, something should happen. Judith made no overt retaliations but, on the contrary, appeared to be interested in what Old Sock knew.

"Do you really mean it when you say elephant's toenails are made from practically the same chemical substance as sheep's wool and tortoise shell?" she asked, seemingly without malice.

"Yes, and that spiky stuff standing up like porcupine quills on little Frederick Quiller's head, too," he answered sarcastically, touching on one of his mother's family cares. Old Teaser thought it was sissy to have his hair nicely combed. "There is a very thin layer, very similar in many respects, on your own face. No wonder you are such a hard-boiled Hannah!"

"Ain't nature wonnerful!" interrupted Old Teaser, also learning satire.

"It isn't 'ain't,' and it is wonderful," was Judith's response, slightly resentful of her younger brother's interference. "Tell me more about the horny layer of my complexion." She was so dangerously sweet about it.

"Some people who do not have sufficient oil glands in their skins," lectured Old Sock, "have a platelike scaliness of the skin called *ichthyosis*. It is called that because their skins resemble fish skins. They were born that way."

"But couldn't *you* do something for them?"

"Oh, I might feed 'em proper doses of thyroid extract to stimulate oil secretion as much as possible. That makes the skin softer. Applying oil helps too. They are usually better in summer and worse in winter," he expounded pedantically.

"That's very interesting," sighed Judith, fooling him with an admiring act. "Is that the reason—I mean, no oil glands in the skin—why fish do not have hairs on their skins?"

"Certainly!" But Old Sock realized he had overstepped his knowledge of nature. "Ah, that is, put it this way: Nature usually puts an oil gland at the root of each hair to—"

"To keep the hairs from fighting about their oil supply?"

"Ha, Ha, of course."

"No oil, no hair; no hair, no oil, is it? No fur on fishes, and all hairs have private oil wells."

"That's the general scheme of things," said Old Sock lamely, suspecting he was being cross-examined for a hidden purpose.

"Then why is it that when the skin is healthy in other respects, private oil wells for hairs and everything, that hairs *don't* grow?"

"I —. You're not asking intelligent questions." Old Sock was irritable and wanted an easy way to stop.

"Bald heads or no beards on men, I mean." Judith was smiling amusedly.

"Humph!" He resented her ignorance. "Women are rarely bald," he snorted. "Only bearded ladies in the circus have whiskers. I haven't time to—"

"But I was thinking of men, not women," Judith insisted.

"Aw, you're just trying to learn 'beauty culture' from me. Go take a course of your own." Old Sock scoffed.

"Well," insisted Judith, "aren't you going to tell me what makes men bald and some with no beards?"

"All men aren't bald. Oh, the dermatologists and the endocrinologists think it's because—because the pituitary gland doesn't work the way it should."

"Then why don't their whiskers fall out, too, like the hair does on their heads?" She was determined to be annoying with her questions. "Why is that right if the pituitary gland has anything to do with it?" Scorn was creeping into her voice. She knew from previous household talk that the pituitary body was a gland about the size of a large pea located at the base of the brain, and it had several different functions.

"Well, all I can find out is that if a certain kind of pituitary extract is injected, some bald men have signs of hair coming back on their scalps," he answered impatiently.

"Does it make their whiskers grow better, too?"

(Continued on page 479)

WASN'T HE SURPRISED WHEN HE LEARNED THAT JUDITH'S APPARENT BROODING WAS IN REALITY SERIOUS ACCOMPLISHMENT!

PROTECTING the HEALTH

BE SURE ALL THE EQUIPMENT IS AVAILABLE FOR WASHING HANDS, WHEN REQUESTING THE CHILDREN TO KEEP THEM CLEAN.

IN SPITE of the desirability of the efforts of every well organized and efficiently administered school to maintain a high standard of attendance and to secure the best scholastic work possible from every student, the physical welfare of the child should receive first consideration. It is true that a great many schools do include health as one of the important objectives of education; but in practice it is usually the most wofully neglected aspect of the curriculum.

The school has a right to expect that the child be sent there free from any contagious disease and in a state of physical well-being that will make it possible for him to secure the most from the educational processes. A well child is a dynamic creature with great potentialities. Life for him is a joyous, happy adventure. His feeling of vitality encourages him to attack new problems with zest and to approach the unknown without fear. The ill child, on the other hand, is a liability to himself, to the teacher and to other students.

If, as could be ideally hoped, the child came to school free from any physical handicap, the teacher's responsibility would be a much simpler problem. Unfortunately this is not the case. This does not, however, relieve the school from its part in protecting children who are well and making every effort to improve the health of those not physically up to par. An educational institution has a definite duty toward every child who enters its portals.

CAREFUL ATTENTION TO THE WATER SUPPLY IS AN ITEM OF GREAT IMPORTANCE IN PROTECTION AGAINST CONTAGION.

PUPILS SUFFER LESS FROM EYESTRAIN AND FATIGUE IF THEY ARE IN A WELL LIGHTED AND WELL VENTILATED ROOM.

THE TEACHER SHOULD TRY TO KEEP THEM BUSY AND HAPPY WITHOUT URGING THEM TO EFFORTS BEYOND THEIR CAPACITY.

of the CHILD: the teacher's responsibility

By ELIZABETH COTTON

In the first place the school plant should be so constructed as to promote the pupils' physical welfare and provide adequate facilities for carrying out the hygienic practices essential to a satisfactory health program. It is of little value, for example, to teach children to wash their hands when the necessary equipment is not available. Among other essentials every building should include a washbowl for every fifteen or twenty children and an adequate supply of paper towels and liquid soap.

Constant watchfulness on the part of teachers and administrators will help to insure proper care of the plant. Cleanliness should be emphasized so thoroughly and practiced so conscientiously that children will be unable to tolerate filth. Dirt and dust constitute a grave and unnecessary menace and should not be allowed in the school. Fortunately this is not so much a problem of money as of good janitor service and constant supervision.

The importance of careful attention to the water supply as an item in protecting children against contagion cannot be overemphasized. It is true that most schools use the city water supply with a recommended type of fountain. In a great many rural schools, however, thousands of children are subjected to untold dangers because of an insanitary water system. A sanitary fountain is now available for rural schools. Where it is impossible to have this because of the expense, a cooler which is closed at the top should be secured. Individual paper cups are inexpensive or can be made by the pupils.

Recently I discovered a school with four teachers and almost 200 students using an open bucket and common drinking cup. One of the basketball players had a number of symptoms of advanced tuberculosis. He was emaciated, lacking in energy except during the excitement of the game and subject to fever and night sweats. Even the beginning of hemorrhage did not cause him to be taken from school, because of his contribution to the team and the fact that he wanted to play. This was a tragic situation—200 innocent children exposed to tuberculosis because of an antiquated water system and the lack of strict health supervision. Because of the remarkable progress the past decade has seen in public health, it is difficult to realize that such conditions still exist. But they do exist and present a challenge to every school and community to see that they do not continue.

Good lighting, proper ventilation and correct seating are health problems which can be at least partially controlled and with which every school administrator and teacher should be familiar. Pupils suffer less from strain and fatigue, are not as restless and consequently do much better work in a well lighted, well ventilated room. The room should be kept at a temperature of from 68 to 70 degrees in cold weather. Children who have been ill or subnormal chill more easily and should be

CLEANLINESS SHOULD BE EMPHASIZED AND PRACTICED SO THOROUGHLY THAT THE CHILDREN WILL BE UNABLE TO TOLERATE FILTH.

DON'T KEEP THE CHILDREN AFTER SCHOOL FOR ANY PURPOSE. IT TENDS TO TAX THEIR STRENGTH AND NERVOUS ENERGY.

taught to dress warmly in order that the other members of the class will not have to sit in a stuffy room. Since most schools are not scientifically ventilated, it is the teacher's duty to understand and watch the temperature and humidity of her own classroom.

The matter of school desks needs special emphasis. Seats used in the average classroom not only induce fatigue and strain but frequently produce postural defects, among the most serious and difficult to correct being scoliosis, or lateral curvature of the spine. It is criminal to allow growing children with plastic bodies and flexible spines to sit for hours at desks that are incorrect in every detail. Before buying and installing seats the school administrator should make an extensive study of this question.

One of the disturbing problems which confronts every teacher at some time in her career is that of accidents. Where large numbers of children are gathered, it is impossible to eliminate that element altogether. The school can, however, limit the incidence and severity of such occurrences. Accident hazards should be reduced to minimum. Broken desks, chairs and other pieces of furniture should be repaired or removed. It is of special importance that playground equipment be regularly inspected and carefully supervised. In answer to some hundred questionnaires relating to school accidents which could have been prevented, it was found that an amazingly large percentage was caused by playground equipment that could have been mended or removed.

The school's effort to promote the child's health is based on the physical examination conducted by a physician at least once each year, preferably at the beginning of the first semester. Thus children who should not be in school because of acute conditions or communicable diseases are excluded. Those able to attend school but not strong enough to participate in strenuous activities are protected. This is especially valuable in determining the fitness of students who desire to take part in athletics. Remedial defects, such as bad tonsils and teeth, are discovered at an early stage, thereby lessening the danger of a general systemic infection. The community is indeed fortunate to have a school physician. Lack of funds is not an insurmountable difficulty, however; for in practically every situation, doctors are willing to give a few hours of their time to help carry out such an examination.

The information secured from the annual health examination provides the teacher with a working foundation for her part in the subsequent health program. It becomes her duty, then, to give the children in her room a daily inspection for the purpose of discovering their physical status and to encourage the hygienic practices taught in the health instruction periods. Below junior high school age this inspection should be a routine procedure, with a definite list of items checked regularly. After that time, because of the lessening of susceptibility to contagious diseases and the students' ability to take some initiative in reporting symptoms, a more informal inspection may be made, frequently without the knowledge of the class.

No teacher should attempt to make a diagnosis. That is the business of the physician who is trained for it. It is the teacher's responsibility, however, to try to keep contagious diseases out of her classroom. By the time such cases have been referred to a doctor, every child in the room may be exposed. It is of the utmost importance, therefore, that teachers be able to recognize a healthy child. It is doubly important that they be constantly alert for symptoms of contagion or infection. Red eyes, vomiting, fever, chills, flushed appearance, rash, unusual pallor, breathlessness, headache, sore throat, running nose, sneezing, coughing, earache, backache, stomachache, dizziness, weakness, pain, unusual irritability or constant fatigue are danger signals which the teacher cannot afford to ignore.

As long as there is any doubt about the child's condition he should be isolated for further check or sent home. This is not as simple as it sounds, however, for many children object to being sent home, and parents are frequently lacking in the realization of the necessity of such procedure. Because of this, they do not always cooperate. Much of the difficulty can be avoided by explaining the purposes of the health program to the parents and attempting to educate them to the principles of the school.

When the child returns to school following a debilitating illness, the teacher should supervise his activity to see that his heart is not overworked. The child has been away from his playmates for weeks and is eager for activity and companionship. The immature heart muscles, weakened by an illness, can be injured by strain to the extent that they may never recover. It would be a comparatively simple procedure to keep the child indoors, refusing to allow him to participate in any games. This is likely, however, to give rise to another very serious problem. It is extremely easy for the convalescing youngster to be badly spoiled. If he is made the center of attention by receiving special privileges, *(Continued on page 465)*

Mysterious Epidemics in History: III

***CLAUDE LILLINGSTON** continues his story of London's seige with bubonic plague during 1665 and describes the awfulness of this terror that took over 1100 lives in two weeks, finally threatening complete extinction of the whole population*

DANIEL DEFOE'S "A Journal of the Plague Year" is remarkably well documented, not least in the matter of references to regulations put in force by the authorities to meet the emergency. One measure was the appointment of honest women of good repute to act as "searchers" in every parish. Theirs was the duty of making due search and true report to the utmost of their knowledge whether the persons whose bodies they were appointed to search did die of the infection or of some other disease. The invidious task of diagnosis and notification imposed on these doubtless virtuous but assuredly ignorant women disqualified them for laundry, shop or any other public work or employment. This measure was, of course, so open to abuse that chirurgeans, distinguished for their discretion, were selected for the task of supervising these women searchers, "to the end there may be a true report made of the disease." For inasmuch as the said chirurgeans were to be sequestered from all other cures and kept only to this disease of the infection, it was ordered that each should receive 12 pence for every body searched, this fee to be paid out of the goods of the party searched, if he were able, or else by the parish.

Many of the regulations put into force were reminiscent of the Mosaic laws. If any nurse-keeper were to remove herself out of any infected house before twenty-eight days after the decease of any person dying of the infection, the house to which she thus removed herself was to be shut up until the said twenty-eight days had expired. When any one was found by an examiner, chirurgean, or searcher to be sick of the plague, he was the same night to be sequestered in the same house, and though he afterwards died not, the house wherein he had sickened was to be shut up for a month after certain precautions had been taken.

The burial of the dead was also the subject of special regulations. It was to take place either before sunrise or after sunset, with only the knowledge and consent of the church wardens or constable. No neighbors or friends were allowed to accompany the corpse to church, on pain of having his house shut up or being imprisoned. No person dying of infection was to be buried or remain in any church in time of common prayer, sermon or lecture. All the graves were to be at least six feet deep, and all public assemblies at other burials were to be forborne during the continuance of this visitation. No clothes, stuff, bedding or garments were to be taken out of any infected houses. The searchers, chirurgeans, keepers and buriers were not to pass through the streets without holding a red rod or wand of three feet in length in their hands and were not to enter into any other houses than their own or those whereunto they were directed. They were also to forbear and abstain from company, especially when they had been lately used in any such business or attendance.

When hackney coaches had carried infected persons to the pest-house or other place, they were not to be admitted to commun use till they had been well aired and had stood unemployed by the space of five or six days after such service. No hogs, dogs, cats, tame pigeons or conies were to be kept within any part of the city, nor were any swine to remain or stray in the streets or lanes. If they did so, they were to be impounded by the beadle, and the owner punished. The dogs were to be killed by the dog-killers appointed for that purpose. Numerous rogues and wandering beggars swarmed in every place about the city, being a great cause of the spread of infection, so constables were to take special care that no wandering beggars were allowed at all in the streets.

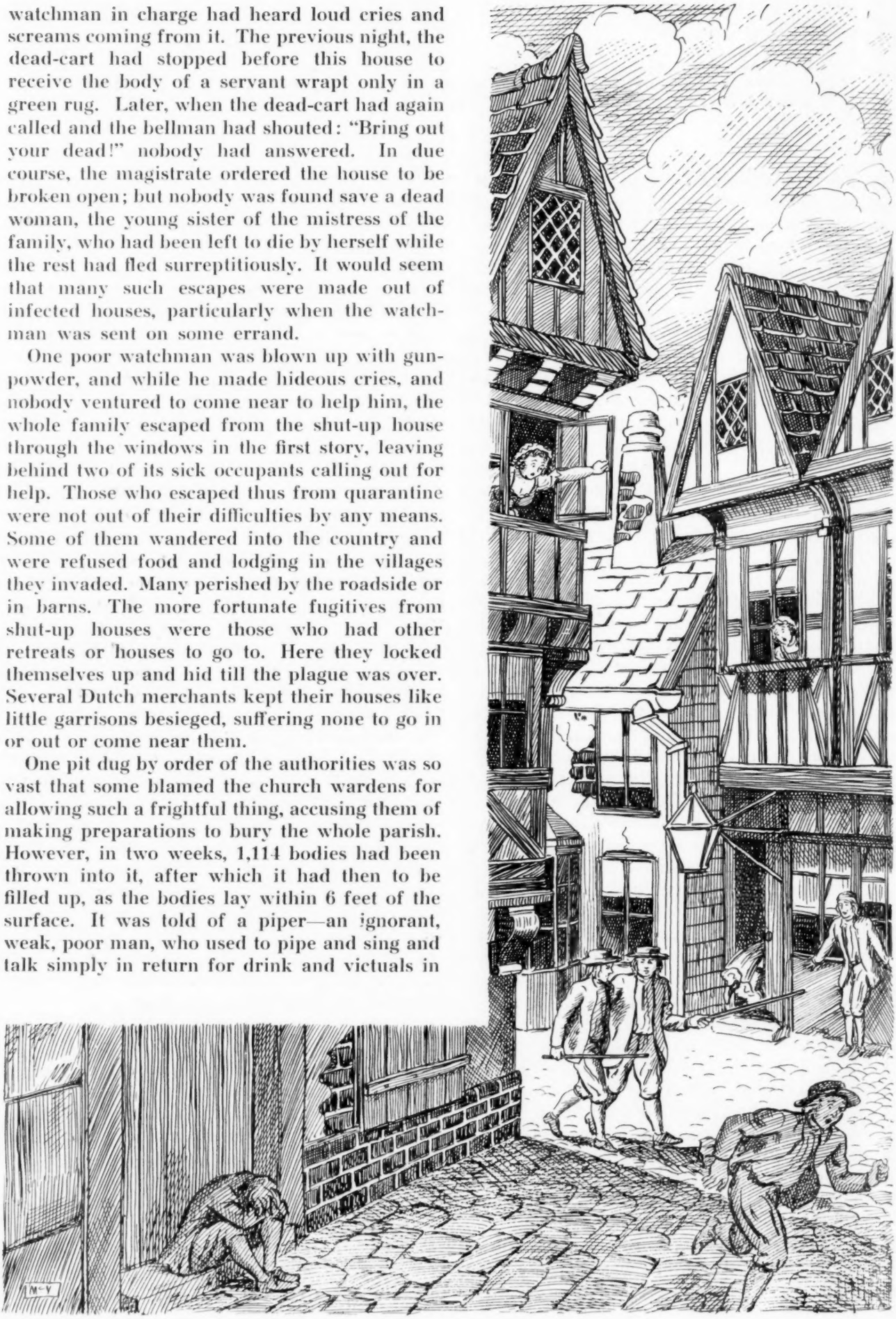
Considerations of both public health and Puritanism led to the prohibition of all plays, bear baitings, games, singing of ballads, buckler play or any other cause of assemblies. All public feasting was also forbidden, and the money thereby spared was earmarked for relief of the poor visited with the infection. Disorderly tippling in taverns, coffee houses and cellars was to be severely looked unto as the common sin of this time and greatest occasion of dispersing the plague.

One of the most poignant incidents concerned one of the shut houses. It transpired that a

watchman in charge had heard loud cries and screams coming from it. The previous night, the dead-cart had stopped before this house to receive the body of a servant wrapt only in a green rug. Later, when the dead-cart had again called and the bellman had shouted: "Bring out your dead!" nobody had answered. In due course, the magistrate ordered the house to be broken open; but nobody was found save a dead woman, the young sister of the mistress of the family, who had been left to die by herself while the rest had fled surreptitiously. It would seem that many such escapes were made out of infected houses, particularly when the watchman was sent on some errand.

One poor watchman was blown up with gunpowder, and while he made hideous cries, and nobody ventured to come near to help him, the whole family escaped from the shut-up house through the windows in the first story, leaving behind two of its sick occupants calling out for help. Those who escaped thus from quarantine were not out of their difficulties by any means. Some of them wandered into the country and were refused food and lodging in the villages they invaded. Many perished by the roadside or in barns. The more fortunate fugitives from shut-up houses were those who had other retreats or houses to go to. Here they locked themselves up and hid till the plague was over. Several Dutch merchants kept their houses like little garrisons besieged, suffering none to go in or out or come near them.

One pit dug by order of the authorities was so vast that some blamed the church wardens for allowing such a frightful thing, accusing them of making preparations to bury the whole parish. However, in two weeks, 1,114 bodies had been thrown into it, after which it had then to be filled up, as the bodies lay within 6 feet of the surface. It was told of a piper—an ignorant, weak, poor man, who used to pipe and sing and talk simply in return for drink and victuals in



public houses—that, being almost starved, he had fallen asleep on the top of a bulk or stall where a person who had just died of the plague had been placed to be fetched by the dead-cart. Both bodies were dumped into it, and the piper did not awaken till the cart came to the place where the bodies were to be thrown into the ground. Struggling to get his head out from among the dead bodies, he raised himself in the cart and called out: "Hey! Where am I?"

It was written of the disease, "The pain of the swelling was in particular very violent, and to some intolerable; the physicians and surgeons may be said to have tortured many poor creatures even to death. The swellings in some grew hard, and they applied violent drawing plaisters or poultices to break them, and if these did not do, they cut and scarified them in a terrible manner. In some these swellings were made hard partly by the force of the distemper and partly by their being too violently drawn, and were so hard that no instrument could cut them, and then they burnt them with caustics, so that many died raving mad with the torment, and some in the very operation."

Even in this dreadful time, there were many robberies and wicked practices. The power of avarice was so strong in some that they would break into the houses where all were dead and without regard to the danger of infection would steal the clothes off the dead bodies. In this respect the women were the most rash and desperate, and some of them were publicly whipped for their petty thieveries.

The pest-houses to which some of the patients were admitted were not for the absolutely destitute, but for servants and others for whom payment could be guaranteed. There were two such houses, and they did excellent service. There was no need of compulsion, for there were thousands of poor folk who would have been glad to have been carried thither and cared for. Many were sent out again from the pest-houses whole, and good physicians were appointed to those places. Their records were indeed so good that in all the time of the visitation, only 156 patients died in the one and 159 in the other.

Many were the theories as to the causation of the plague. As for its diagnosis, it might be effected by breathing on a piece of glass where, after condensation, "there might living creatures be seen by a microscope of strange, monstrous, and frightful shapes such as dragons, snakes, serpents and devils, horrible to behold." More rational was Defoe's reasoning about the incubation period of the disease. "It may be proper to ask here how long it may be supposed men might have the seeds of the contagion in them before it discovered itself in this fatal manner, and how long they might go about seemingly whole, and yet be contagious to all those that came near them. The opinion of physicians abroad seems to be that it may lie dormant in the spirits, or in the blood vessels, a very considerable time. Why else do they exact a quarantine of those who come into their harbours and ports from suspected places? Forty days is, one would think, too long for nature to struggle with such an enemy as this, and not conquer it or yield to it."

At first many precautions were taken to avoid infection. When any one bought a joint of meat of the butcher, the purchaser would insist on taking the meat off the hooks himself, while the butcher would not touch the purchaser's money but have it put in a pot of vinegar. Every one save the poor carried bottles of scents and perfumes. But as the community became more and more demoralized by the appalling catastrophe, people could not toll the bell, mourn nor weep nor wear black for one another as they did before; they could not so much as even make coffins for those who died. After a while the fury of the infection appeared to be so increased that they shut up no houses at all. Whole streets seemed to be desolate, doors were left open, and windows stood shattering with the wind in empty houses. Men everywhere began to despair, and the terrors of death sat in the faces and countenances of the people.

In that very moment the tide turned. Though infinite numbers were sick, fewer died. It is impossible to express the change that appeared in the faces of the people that Thursday morning when the weekly bill came out. They shook one another by the hand in the streets, crying out: "God be praised!" Wherever the physicians visited, they found their patients better. Either they had sweated kindly, or the tumors were broken, or the carbuncles went down, or the fever was gone, or the violent headache was assuaged. Nor was this because of any new medicine or method of cure discovered.

The public swung promptly from the depths of despair to the heights of careless optimism and was no longer afraid to pass by a man with a white cap on his head or a limping leg, occasioned by the sores in his groin. It is probable that this turn in the tide was not as dramatically sudden as Daniel Defoe would have us believe, for even in the following year, the year of the fire of London, 1666, there were some 2,000 deaths from plague in London alone, not to mention its ravages in the provinces.

[NOTE.—In the June issue, Dr. Lillingston will tell of the Broad Street pump epidemic of cholera in 1854.]

DURING WORLD WAR DAYS the Red Cross Gray Lady Hospital and Recreation Service originated when base hospitals were established overseas. In the spring of 1918, there was a great need for convalescent houses, where the recovering wounded could gather to read, write letters and enjoy the companionship of women of their own land. A call came from the Red Cross overseas, appealing for women capable of acting as suitable hostesses for these convalescent houses or huts. The Gray Lady Service was established to train volunteers to meet the need. Quickly and inevitably, the Gray Ladies became an important unit of the Red Cross volunteer services.

As the sick and wounded returned from overseas, the need for convalescent homes or convalescent quarters in government hospitals became increasingly urgent. Suitable accommodations were provided. Additional units of Gray Ladies were trained to provide recreation and perform such helpful services for the patients as might be approved by the medical officers in charge.

From their gray uniforms, patterned after Florence Nightingale's, they first received the name of Gray Ladies. The name was given them by the disabled soldiers at Walter Reed General Hospital in Washington, D. C. Ever since, they have been so designated by the men to whom they minister.

It was not long before civilian hospital authorities recognized the great value of the Gray Lady service and requested the establishment of units in their institutions. Steps were taken to meet such demands.

Gray Ladies were soon found to be of great value in times of emergency. Their hospital training stood them in good stead for service in disasters; they helped to restore the morale of disaster victims by the establishment of recreational centers and children's playgrounds.

Each Gray Lady is recommended by two reliable persons and selected by the Red Cross on a basis of loyalty, capability and dependability. She receives a special course of training, after which she begins a period of probationary hospital service.

When a Gray Lady satisfactorily completes her probationary service, she is graduated, given a certificate and pin and enrolled as a member of the Red Cross reserve. She is assigned to a hospital where she performs a certain number of hours of volunteer service weekly. She does not engage in nursing but augments the service of the nurse or the social worker, carrying on as a member of a great nationwide corps of trained volunteers, serving alike the hospitals, the hospitalized and the Red Cross.

—American Red Cross.

THEIRS IS A SERVICE KEENLY DESIRED BY EVERY PATIENT. THE GRAY LADIES ARE THE ONLY ONES WHO HAVE TIME TO ENTERTAIN OR OTHERWISE HELP THE PATIENTS' PERIOD OF CONVALESCENCE PASS MORE QUICKLY.

GRAY ANGELS

By ALWYN W. KNIGHT

HIS YOUTH was accentuated by helpless brown eyes and the way his dark hair shaped a widow's peak on his forehead. I looked down at the bed, elevated on "shock" blocks, and tried to say something reassuring. But the shadow of death was between us, so what was the use!

The nurse brought his tray. They tried to feed him, and I looked quickly away, but his eyes, boring over my shoulder, compelled attention. He was feebly waving the nurse back and trying to speak to some one behind me. The nurse, spoon poised in indecision, looked over my shoulder too. She nodded, and the Red Cross Gray Lady who had brought me to the ward stepped forward.

Apologetically she said, "He likes me to do it," and went to the bed. She fed him as she would a baby, and there was a rare smile on his lips, and all the time he swallowed so painfully his eyes never left her face. When it was done the boy whispered a syllable that sounded like "Ma" and seemed to go to sleep. The Gray Lady stood there, and you noticed that her square hands were tender as they smoothed the boy's hair back from his face.

I stepped into the corridor, and she joined me in a moment, answering crossly when I spoke: "Of course he's going to die. We all do, sooner or later!" And she swished along the corridor, planting her heels firmly on the polished linoleum.

I had come to Walter Reed General Hospital, the Army Medical Center at Washington, D. C., to learn about Red Cross Gray Ladies. I knew that these uniformed volunteers did an essential service in more than a hundred civilian and military hospitals, but before I went I thought the work was rather prosaic. I expected the result of my effort to approximate a bookkeeper's statistical sheet: So many Gray Ladies giving so many hours of service, distributing so many packs of playing cards to so many patients. But now, I wasn't so sure. Here was a dying man calling a Gray Lady "Ma" and willing to be fed by no hand but hers.

At the Red Cross House, grafted to one of the hospital wings, Margaret Lower, Red Cross

field director in charge of both Gray Lady and medical-social services at Walter Reed General Hospital, granted an interview.

"Your Gray Ladies make a fine showing," I said. "But it's a picture service, isn't it? I mean, they do what any orderly could. Give cards to men who don't know clubs from spades. Read 'Snow White' to an ex-sargeant of the marines."

Margaret Lower stiffened. The reportorial trick of baiting the person interviewed was working.

She put her hands flat on the desk. "That woman who just left," she began slowly, "is in a way quite remarkable. Perhaps you think of our Gray Ladies as society women, as debutantes. Many of them are. But *she* isn't. Mollie has had none of the so-called advantages. And the men revere her, and she breaks her heart over them. She gives us most of her time. She will tackle anything. When a man gets sick, he asks for her, and she always goes.

"A funny thing," Miss Lower continued, "but until recently I had men handle the work in 'N.P.,' the neuro-psychiatric ward. It's a tough assignment, and they frequently broke down. Then Mollie asked for a chance at it, and I agreed to a trial. I wish you could see her swing into 'N.P.' in the morning; she's not afraid of anything. And she never has any trouble.

"Dangerous? Why, yes. But she feels she can give more understanding than a man could. And she has reason to think so. At Christmas she receives hundreds of letters from men who think she is their mother. Letters come addressed to 'Ma,' and 'Mom.' Most of them are confiding, written with the frank candor of little boys naively asking for the sympathy which she always gives."

Suddenly Miss Lower swung about, just remembering. "Oh yes, and talk with some of the officers here! We tried an experiment. We thought that maybe our service in the officers' ward was an imposition, so we took it off. Most of the officers have families with means, and we felt that perhaps we could do nothing for them that was not already done. But the next day dozens of them complained. They wanted to know if they were being discriminated against. So we went back in the officers' ward pronto, trying not to look too pleased and smug."

Miss Lower told of one case. John had been in the hospital for over a year. His disease was incurable, and so it was only a question of time. He lay on his back, made petulant by agony and the prospect of death. He began to ask for things, little things, at all hours of the day and night, frequently complaining about little things of no significance.

The Gray Ladies adopted him. Said Margaret Lower: "Whatever he wants, whatever he asks for, let us know!" It was a case of angels rushing in where hospital routine could not tread, and the entire hospital sat back to watch the uneven contest between the dying boy and the handful of doggedly persistent Red Cross volunteers.

The crisis came when the youth asked for molasses. The request did not seem unreasonable, and molasses was forthwith procured. But it was not, it seemed, the right kind. The Gray Ladies were told in no uncertain terms that molasses wasn't molasses unless it was black.

Heads were put together, and one of the Gray Ladies hit on an idea. She knew some one who dwelt in the mountains of Tennessee who had mentioned that "black" molasses was indigenous to that part of the country.

A telegram was sent, urging haste, and in reply, a keg of black molasses was sent. It seemed to be a cause of great satisfaction to the boy.

Then there was the youngster who had been at Walter Reed over a year. His plane had crashed, and he had been terribly burned pulling the others to safety. The kid was in agony, naturally. Only a Gray Lady could take time to read to him, feed him, help him. He was so much quieter when she was around. I saw her later: She was elderly, with a calm, sweet face and gentle eyes.

Miss Lower said, "Go to the wards. Watch our women work. See what they do and how they do it." The Gray Ladies play games with the men, write letters for them, bring them magazines and small gifts and read to them. But the real gift, the gift which the public knows nothing about, is their gift of "self."

CONFIDENCE

A shining corridor, windows that looked on pain,
A swinging door on silent hinges—these
For an hour inscribed my life, and there remain
Indelibly etched by fear—by memories
Of whispered words, of soft footsteps on the tile,
Of eyes above white masks, of glittering stands—

I watched her bright head turn the corner, while
I placed her future in your skilful hands.

By GRACE MADDOCK MILLER

LOOKING FORWARD TO JUNE

TO A YOUNG LADY WHO HAS JUST ACQUIRED A HUSBAND—You have something on your hands! Right now, your most absorbing interest is probably "How to Keep Your Husband Healthy." "Being a tower of strength and the seven pillars of wisdom rolled into one will be a help and will just about take care of the business at hand, for it is no small job to keep a man on the straight and narrow, as far as his health habits are concerned," declares Harriet Acheson Koch, author of the article by that title in the June issue of *Hygeia*.

The bride who is wise will temper her solicitude with tact; and she will see to it that the man who is to provide for her is himself provided for.

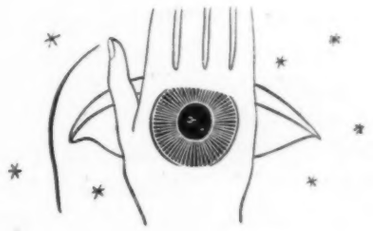
HOW DO THEY GET THAT WAY? Those jaunty young men who strut about the field at West Point, N. Y. Watching the parades, ceremonies and formations that are featured during "June Week" at the U. S. Military Academy, one wonders what regimen is responsible for their unquestionable fitness. William H. Baumer Jr., First Lieutenant, Infantry, who is also a member of the faculty of the department of economics, government and history at West Point, escorts *Hygeia* readers through the routine of the great Army training "camp."

Lieutenant Baumer says, "If the methods used in this physical training and education are not those of other physical directors, remember that all these Plebes [first year students] are in the best of health; they live ruggedly and are geared quickly to the stenuous life." A year of strange orders to "Pull in your chin, mister; squeeze your shoulders back; reach for the sky with your 'trunk'; pull your wings into your sides, mister; and drag in your stomach" are the proving ground for these cadets. The other customs and traditions are just as unique — as Lieutenant Baumer shows.

A DEVICE THAT PATS YOUR FACE until you go to sleep and another that seals your eyes, ears and mouth so you can do nothing but go to sleep are two of the strange mechanisms that are described in the June issue. S. R. Winters presents a satire on peculiar patents.

The first "sleeper" is composed of a collar-like band, provided with an adjustable padded spring and a strap for retaining the band in position on the neck. Another strap holds a small paddle against the cheek. A slight pressure releases a spring which sets the paddle in motion, resulting in a continuous patting.

The second "sleeper" was devised to exclude light and sound and prevent snoring. The headgear consists of eye shields and a nose guard combined with ear plugs on an adjustable framework; it also has a "stirrup" to hold up the chin, preventing the mouth from dropping open.



ROLL A SHEET OF PAPER INTO A THIN TUBE, and with the right eye look through it at some object across the room. Leave your left eye open. Now move your left hand along the side of the tube, with the palm toward you. What happens? Do you see the hole in your hand? Why, how is that possible?

These and other interesting tricks with the eyes are described and explained in the article entitled "See for Yourself" by Richard F. Trump.

BY WHIPPING OR SCOLDING, it may be possible to get the child to go to bed in the dark in spite of his fear for the night's deep shadows. But he will lie in bed trembling with fright, spoiling both his sleep and his disposition, to say the least. According to William I. Fishbein, M.D., who writes on how to handle "Your Child's Fears," this is a situation which requires the greatest patience to overcome.

Methods for coping with this condition and others based on fear are explained in detail in this article and should prove extremely enlightening to mothers and others who encounter examples of fear in their dealings with children.

OTHER FEATURES in the June *Hygeia* include "Getting Ready for Married Life" by Howard Dittrick, M.D.; "The Modern Aviator" by Sibyl Winser Johnston; "Homogenized Milk" by Philip C. Jeans, M.D.; "Salads to Tempt the Palate" by Harriet Morgan Fyler, Ph.D., and "Health Through Legislation" by William West McFarland, M.D.

WHITE ESKIMO CHIEF: II

***On the tundra flats of the Arctic area lie tiny villages of Eskimo dwellings. Here the drama and pathos of their uncivilized world are daily enacted before the eyes of author* CLARK M. GARBER**

SFANAGAMUTE, which is without doubt one of the most primitive Eskimo colonies in North America, is surrounded by a veritable fence of fetiches. These fetiches and charms consist of discarded garments, foot wear, skins of animals, skulls of dogs, seal, fox, reindeer and walrus, all of which were mounted on stakes and set up around the village to keep the *jariax,* evil spirits or devils, away. On my first visit to Sfanagamute, I was not accorded an especially cordial welcome. Here the native witch-doctors wield a terrible power over their people, and they are consequently highly averse to the encroachment of outsiders. During my first visit, I endeavored to take some pictures of the unusual people and objects in this village but was soon notified by the medicine-men in no uncertain terms that I could not use my "magic box" in their village. However, I had been hoping that on this visit to Sfanagamute the people would have learned of my mission among them and would relent somewhat in the application of their primitive tabus. Sure enough, when I stopped my dog team beside the *cosegy* the witch-doctors and chief were there to meet me. By that unfailing, unseen method of rapid communication known as the "moccasin telegraph" they had learned of Atanak, their name for me meaning "Big Chief," and how I brought help to the Eskimos in distress. There were even slight evidences of happiness and joy at my coming. Their attitude toward me was the characteristic deference they would show to a visiting chief or other dignitary.

I now made it known that I would live in the *cosegy* with the men of the village, and with the help of some willing boys I soon had my effects stored in a safe place. Before demonstrating any special interest in their private affairs, I set out with my medical kit in hand on a tour of the village. In every home visited, the people were found subsisting on nothing but needlefish. They are small fish about the size of a sardine. Instead of a dorsal fin they have a row of fine needle-like projections slanting toward the tail. From these needles they get their name. To devour them is a real gastronomic feat. A meal consists of a pint or two of needlefish mixed with seal oil, if they have the seal oil. They must be swallowed whole and without mastication, else the needles will stick in the throat, and the fish will not go down. They are always eaten in the raw state, the seal oil serving the dual purpose of lubricant and food. At this time of the year the needlefish enter the mouths of the delta streams in enormous schools. By making a hole in the ice and by the use of a dip net, an Eskimo family may take hundreds of pounds of these miniature fish from the water in a single season. Thereby the Sfanagamute people were able to weather the famine without a single casualty.

Entering a dwelling at the extreme south end of the village, I was surprised beyond speech at the sight of a white woman with snow-white hair lying on a bed of skins. Were my eyes deceiving me, or did I see an apparition? In my long life with the Eskimos, I had never seen a sight like this before. When this woman saw my utter surprise at her presence in a primitive Eskimo home, she began gesticulating and talking excitedly. Her language was neither Eskimo nor English. It was a tongue I could not understand; but remembering the Russian regime of former days, I suspected that she might be a Russian woman. When she discovered that I could neither speak nor understand her language, she addressed me in the Eskimo tongue. In that crude, unwritten language, I learned her story. Following are her words almost verbatim.

"My mother was a Russian lady. As a young bride, the wife of Ivan Petrof, she came to Alaska where her husband planned to establish a trading post. At first, my father traveled a great deal among the Eskimos to trade with them. Later he established a trading post at the village of Tanunak on Nelson Island. When I reached the age of 19, I married Waska Bellkoff, a halfbreed who had been working for my father. Shortly after my marriage, my mother and father died. My two brothers, who were much older than I, had long since left home to seek their fortunes in other lands. I

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THEY HAD LEARNED OF MY COMING BY THE "MOCCASIN TELEGRAPH" AND WERE OUT TO MAKE ME WELCOME.

was left alone with none of my blood relatives near me. My husband was a good man, and we were happy until our two children died, which was before they had reached maturity. And I was not more than 55 years old when my husband lost his life. This left me all alone in the world. The Eskimo people were kind and good to me, else I would have been very lonely. As long as the merchandise in the trading post lasted, I was able to live comfortably. But there came a time several years later when all the trade goods were gone. I was then forced to depend entirely on my faithful friends, the Eskimos, for my living. And they have indeed been true and loyal friends to me."

"How did you come to be living at Sfanagamute?" I asked her.

"Many years ago, I made a trip to this village to visit with my Eskimo friends, and during my visit was afflicted by some kind of sickness, about which I knew nothing, and have made my home with these good people ever since then," she replied.

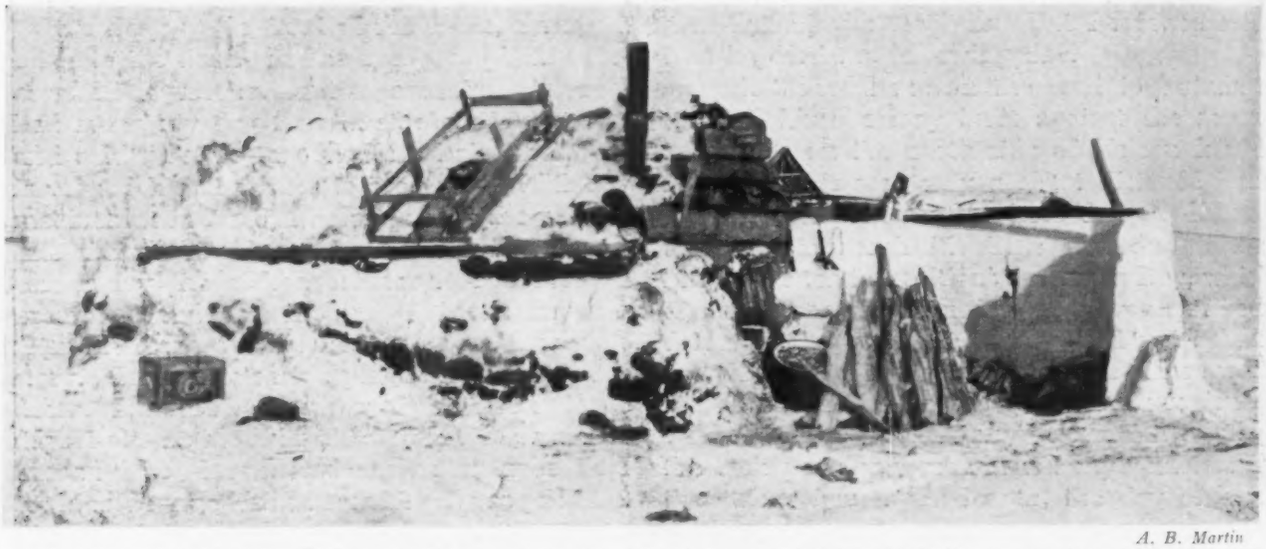
"May I ask how old you now are?" I continued.

"I was born in the month of June in 1839." She said.

Annecia Bellkoff, which was the name she gave me, was almost 91 at the time of my visit. Having spent her entire life among the Nunivagamutes, she naturally turned to them when finally left alone by the death of all her kin. At the time of this writing she has most likely found a permanent resting place in the Eskimo burial ground at Sfanagamute, and doubtless her good Eskimo friends have placed her property on her grave so that she might have its use in the Eskimo "Land of Happiness." It

was indeed a great disappointment to me when I found that time would not permit me to spend many more days with this most interesting character.

On the second day of my visit at Sfanagamute, I witnessed my first actual demonstration of the practice of child serfdom. From observations I have made in many Eskimo colonies, I have long suspected the existence of such a practice but have never witnessed such a clear example as I found in this village. Among these people, as among all Eskimos, the orphan children are coveted and quickly adopted by families desiring their services. As I sat in one of the large *upidts* visiting a family and treating their sick baby, I chanced to see a boy and girl, each being approximately 11 years old, making ready to perform some mission at the command of their foster father. Two older boys, blood children of the same man, sat by and were apparently not included in the plan. Especially did I observe that both the father and mother of this family were healthy, robust individuals, well fed and lazy. Without demonstrating too much interest in this case, I eventually learned that these two children, adopted orphans, were going to the needlefish holes to dip fish all night. I watched them hitch four scrawny dogs to a sled, take their fish baskets and dip nets and depart for the fishing place three or more miles away. There in the bitter cold of 38 below zero they would labor until the coming dawn. I was awakened by their return at daybreak the next morning. After caring for their dogs and storing the baskets of needlefish on the cache, they entered their home and were given a breakfast of needlefish and blubber. To me this seemed like mighty poor rations for two youngsters who had spent the night out in the extreme cold. Since I was by this time ready to make my own breakfast, I added enough tea to the pot I was brewing for myself so that each of the orphan children might have enough of the hot beverage to warm their chilled bodies. Happily did they hold their wooden cups while I poured them full. From my grub-box I procured many lumps of "swede sugar," which I divided equally between them. To the serving of tea was added many cakes of hardtack, which they accepted with eager hands and many *quianaquas,* thank you's. But in acting the benefactor to these poor orphan serfs, I unknowingly started something. The lazy, well fed father and mother and their equally lazy sons demanded that the orphans share their special treat with them. My refusal to allow this promptly precipitated a jangle of angry words. Nevertheless I was determined that the orphans were to "have their cake and eat it too."



A. B. Martin

A SOD DWELLING HAS A WIND BREAKER OF SNOW BLOCKS AND A FENCE ON THE ROOF TO PROTECT THE WINDOW FROM THE DOGS.

Doubtless these children would suffer at the hands of their foster parents on account of this preferential treatment, but the banquet I had provided for them would fortify them with sufficient strength to endure the punishment they might suffer. Even though I warned the parents against any mistreatment of the two orphan children, I felt sure some kind of torture would be inflicted on them. Eskimo parents rarely, if ever, punish their own blood children. They fear that the spirit of their deceased relative guiding the life of the child may be offended and cause the child to fall sick or die. But they have no such foolish tabus or superstitions regarding orphans, because they

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SEAL HUNTING IS ONE OF THE MOST IMPORTANT ACTIVITIES OF THESE PEOPLE.

are not begotten by themselves. As I continued my travels among these delta Eskimos I witnessed many similar cases of child serfdom. The practice is bound to prevail as long as their primitive life is unchanged. The same situation prevails in Eskimo villages where we have had schools and missions for many years, but there it is disguised to a certain extent so that it is not readily discernible. The adopted orphans are forced to perform the hardest work and the most menial tasks about the home. They are given only the cast-off garments to wear, and their hunger is the last to be satisfied.

Space will not permit the recounting of the many interesting psychosocial factors which control the lives of the primitive Sfanagamute Eskimos. I must get on with my journey. Many Eskimo villages are ahead, and in them there are doubtless many primitive souls in need of help. On the sixth day after my arrival at Sfanagamute, I began the journey to Tanunak, some 50 miles distant. My dogs were greatly refreshed after their long rest, even though they must have been tired of the needlefish diet on which they had been subsisting for the last five days. About noon I came to the village of Aguichak, but not a sign of life could be seen about the place. Had the entire population succumbed to the epidemic of starvation? Not even a dog with its customary snarls was there to greet my team. Here indeed was a village of the dead. Making my sled fast to an old whale rib sticking out of the snow, I entered one of the *upiats*, where I quickly learned the true state of affairs. The dwelling had been divested of all movable property. All the other *upiats* in the village had been similarly abandoned. It was evident that the Aguichak people had sensed the coming period of starvation and had moved with their families to another and

better hunting ground. When I arrived at the next village, I made inquiries concerning the whereabouts of the Aguichak people and learned that my conjecture was correct. They had moved to the coast where they could get needlefish to feed their families and their dogs.

My trail now led me across the inlet, which connects Baird Lake with the ocean. Thence I traveled across the tundra flats to the village of Nichtmute. At Nichtmute there was little evidence of starvation. In fact, the dogs were apparently well fed, and there seemed to be plenty of food on hand for future consumption. On the mountain side there stood a decent sort of cabin which must have cost almost interminable labor to build. My leader headed straight for the cabin. Apparently he had learned to pick out the most imposing structure in each village.

As I drew up in front of the cabin, a woman came to the door. In her eyes was plainly discernible a great amount of anxiety. Before I had made my dog team fast, she came to me and said, "Petrie—a catholic mission helper—is very sick and wishes to see you." With my medical kit in hand, I accompanied the woman into the cabin. On an improvised bed in the corner lay the sick missionary. His labored breathing and the trickles of blood running from the corners of his mouth told me the whole story. The white man's plague had sealed his doom. It would be a matter of only two or three days until he would pass beyond the pale of human life. I rendered such assistance as I could and made him as comfortable as possible. Then I advised the woman to have him taken to the village of Tanunak, where he would have the care of the white teachers. Regardless of the fact that the cabin was veritably full of tuberculosis bacteria, I prepared a lunch for myself and gave my dogs a short rest. I have no fear of the type of tuberculosis which takes so many lives among the Eskimos. I have repeatedly slept in Eskimo homes, which were thoroughly contaminated with the disease, and have never had the slightest symptom of the contagion. It seems that white men do not contract the particular form of tuberculosis carried by the Eskimos.

There remained approximately 15 miles of my day's journey to Tanunak. The teachers, Mr. and Mrs. Amos Sprunger, had observed my approach and were waiting for me. Tears of joy streamed from their eyes, for they had not seen another white person for almost twelve months. Their behavior was not unusual. Many times have I arrived at completely isolated native schools to be literally embraced by the teachers, because they were overjoyed to see one of their own race and especially one in whom they could confide their troubles. My services were truly missionary, not only with respect to the Eskimos, but to all who may need my help, whether they were Eskimo or white folks.

For their escape from the ravages of famine and starvation, the Tanunak people may thank their good teachers for their foresight and the abundance of their personal larder. They were found in an excellent state of health, and their homes showed a marked improvement over their condition as I found them on my previous trip to this village. The day following my arrival at Tanunak, I learned that Petrie, the missionary helper, had been brought to the village. He was made as comfortable as possible in a mission cabin and was given medical attention by the teachers. But I learned later that he died the following day.

April 3 found me on the trail to Yukuk, a small Eskimo colony built against the mountain slope on the north side of Nelson Island. Although this was only a short distance from Tanunak, it took me a whole day of difficult traveling to reach it. This was due to the hazardous trail conditions on Hazen Bay, which demanded extreme caution on the part of both driver and dogs. The famine had not spared the village of Yukuk; but conditions there were not as bad as in the villages I had previously visited. After attending my dogs and treating the sick people, I established my quarters in the chief's home. At length, the day of hard mushing began to bring about the drowsiness which warned me of the need of a good rest. A supper was prepared from my grub-box, and then after a few soothing drags on my pipe, I slid down into my sleeping bag and was almost instantly asleep. Early morning found my energies completely restored. Being unable to procure any dog feed in this village, it was imperative that I continue my journey. What bad situations I might find in the villages to follow, I did not know. The first peep of dawn coming through the seal-gut skylight brought me to the realization that it was time to be on the way. Mrs. Sprunger had stocked my grub-box at Tanunak with delicious cookies, bread and salmon strips, so that I quickly had a good breakfast assembled. By 6 o'clock I had received instructions as to the trail from Angnovak, the Eskimo with whom I had spent the night, and was soon on my way to the next village, Nofkofthaligamute.

The snowy trail was that day destined to be snowy in the extreme. *(Continued on page 446)*

*Reproduced from certified, unretouched photographs of identical foods, refrigerated, uncovered, at comparable temperatures.

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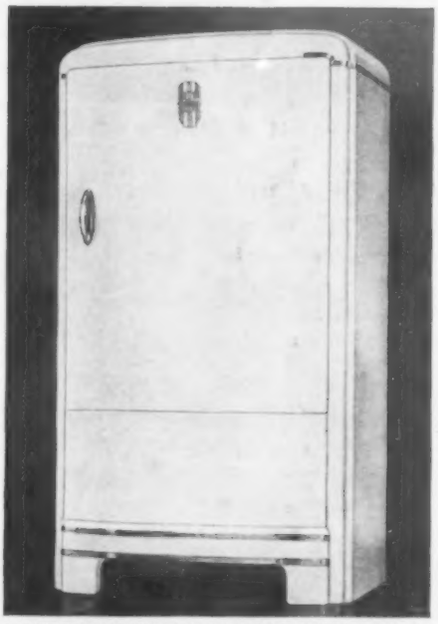

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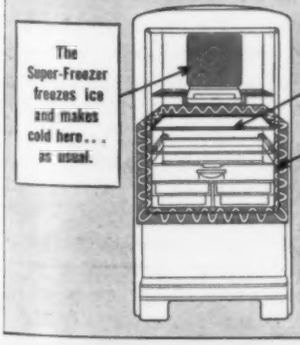

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2 "Dr. Wood told me to take a daily walk during the sunny hours, but warned me against getting overtired. I'm allowed to do everything but the heavy housework."

3 "In addition to my regular eight hours' sleep, I plan my day to include an hour's nap every afternoon. I take a few snatches of rest in the morning, too."

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5 "The doctor complimented me today for living up to his instructions. Says that's why I've nothing to worry about. I feel fit and confident. . . . Any day now—"

6 "It's a darling little boy, three days old and as hungry as a bear. It's fun to nurse him. Dr. Wood says he is making a fine start in life. Me? I'm *enjoying* my five meals a day."

7 "Learning to take care of baby keeps me busy. The Visiting Nurse is such a help. Dr. Wood told me to wait six weeks before doing a really hard day's work."

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WHITE ESKIMO CHIEF: II

(Continued from page 444)

It was no more than two hours from Yukuk when one of the characteristic surface blizzards of the tundra country came down on me. Its depth was no more than 75 feet; yet it blew the snow along the surface with such force that my dogs were invisible most of the time. Fortunately the temperature had risen to about 15 degrees below zero, else I would have had a really tough time of it. As it was, the trail soon became completely obliterated. Jerry, my leader, did his best to locate the lost trail; but the scent was gone. Because of the cloudless sky and beautiful sunshine when I took the trail that morning, I failed to set a compass course to the next village. There was only one thing left for me to do. I must allow Jerry to take me where his own sense of direction would lead him. From past experience, I knew if I gave him no commands he would sooner or later bring me to some Eskimo village or shelter. Hour after hour my faithful leader led the team through the blinding snow, depending entirely on his animal instinct of direction. At great length, Jerry brought the dog team to a halt beside a lonely *upiat* on the bank of a slough. It did not require a "whoa" or an application of the sled brake to bring the dogs to a stop. To them the presence of an Eskimo dwelling meant the end of the harrowing day's travel. While the dogs lay in the snow licking their sore footpads and taking a much needed rest, I endeavored to find some means of digging my way through the snow-clogged entrance to the dwelling. Failing in this, there was only one thing left for me to do. I must continue my journey. Fortunately I espied a faint trail leading away from the *upiat*. At my command to mush, or go ahead, the dogs eyed me with apparent thoughts of disgust and disappointment; but my leader, always faithful and willing to do his duty, soon had the team in motion. Three hours of following the almost invisible sled tracks brought me to a sharp mountain bluff. In passing around this bluff the dogs quickened their pace and in a few minutes brought me into the same village from which I had departed fourteen hours earlier. Forty miles through a blinding blizzard with

no distance gained in my journey was hard medicine to take. This would also mean a day's rest for the dogs before they would be in fit condition to continue travel, and the prospect of a good rest was no mean contemplation for the driver. Only two days of rations were left for the dogs; but I had not the heart to cut down on their food after such a hard and miserable day of faithful service to their master. Possibly I could trade for some dog food in the next village.

On the second day following this most unpleasant experience, I again took the trail. I now directed my course toward the village of Kaiyalavigamute, omitting my intended visit to Nofkofthaligamute. The blizzard had entirely passed on, and the day was one of beautiful sunshine. The twenty-five mile mush to the next village was uneventful. I arrived at this small tundra village about midafternoon and immediately visited all the Eskimo homes to render such medical aid as might be urgent. The people of this village were well stocked with food and had suffered in no degree from famine and starvation. They had stored a large quantity of whitefish, which they had taken from the lakes before freeze-up came. During the day the temperature had risen to 10 above zero, thereby heralding the approach of spring. Within two or three weeks the tundra would be bare. I would have to abandon the remainder of my contemplated trip to the mouth of the Yukon and get back to my headquarters while there was still enough snow for the sled. From this village, I would cut across the big lake country to the village of Choquaktoli, Nunachak, Nanavanagluk, Bethel and home. And with the moderating weather at hand, I could readily anticipate a wet and uncomfortable time of it during the remaining few days of my journey.

In the village of Kaiyalavigamute, I again had the opportunity to study the life of the Eskimos in its most primitive form. These people had had no contacts with the white man, and their culture was therefore unaffected by our civilization. Having established myself in the *cosegy* with the men of the village, I was given an unusual opportunity to observe their daily life functions and customs. In one corner of the *cosegy* sat an old man slowly dying with tuberculosis. Others sat about the walls on their grass mats making and repairing bird spears and bows and arrows in preparation for the return of the migratory fowl. The entire group were being entertained by an old and experienced story teller, as they plied their various occupations. He was narrating one of the legends of his people with frequent interruptions of *Ee-e-e-e-e-e*, yes, yes, yes, and *kunga, kunga, kunga*, no, no, no, as members of his audience approved or disapproved the incidents in his tale. The men of the village virtually live in the *cosegy*, much as the walrus males herd together after the breeding season. There is no definite time for meals, but the Eskimo wives seem to know by intuition when their men are hungry. Stooping through the low entrance tunnel and door, one by one, they came into the *cosegy*. Each woman carried a platter of food for her respective husband. After the meal is finished, each man places his platter in a special place, where his wife is accustomed to find it and return it to her dwelling. For the sake of the valuable information I could acquire from these people, I endured their extreme filth for almost two days.

On April 8 I was early on the trail to Choquaktoli, a small village situated on the eastern shore of a large tundra lake, some 50 miles distant. The temperature was now above zero here for the first time. Mild spring weather would soon turn the tundra country into a water-covered terrain, which would be almost impossible for a dog team to traverse. Already the increasing warmth began to show on the dogs. They were getting lazy, and their tugs were often slack. Not until 8 o'clock that evening did I reach my day's destination. The only frame building in the village was occupied by Kinegak, a native missionary of the Moravian faith. From him I purchased a generous quantity of frozen whitefish for my dogs. On the invitation of the missionary, I moved my effects into his cabin, where I was pleasantly greeted by his wife and three small children. On the following day the usual census of the village was taken with a view to discovering whether or not a school would be warranted for this place. The population was found to number 108, a number far above my estimate. This village was without a *cosegy*, which fact attested the influence of the missionaries from the Kuskokwin River.

The evening of the tenth found me pulling into the village of Nunachak. The teacher, Miss Wilkin, also a nurse, has accomplished fine work at this place. She has had a hard battle on her hands because Nunachak School is not long established, and the village is still a great deal under the influence of the native witch-doctors.

On the evening of the thirteenth, I came to Bethel and drove my dog team directly to the road house. When I had had my first real bath for four weeks, I set out to purchase a few items at the trading posts for my wife and son. But I dared not tarry long at this place because of the rapidly moderating weather. April 15 found me hitching my dogs to the sled about 4 o'clock in the morning. Dog team travel was now becoming both hazardous and disagreeable. Most of the 30 miles of this last day's mushing was done in water, which was now rapidly collecting in the low places from the melting snow. My dogs were thoroughly familiar with this trail and knew exactly where they were going. No urging was necessary to keep them moving, regardless of the warm day and the uncertain footing. They, like myself, were ready and anxious to take a good long rest and eat white man's *kowkow*, or food, once again.

[Conclusion]

DIABETIC GANGRENE

(Continued from page 446)

who does not cooperate with the physician and thinks that nature will take care of everything. Such an attitude is inexcusable and will usually lead to eventual loss of one or both of his legs.

In summary, I wish to emphasize that diabetic gangrene is for the most part preventable in the light of modern knowledge of its cause and treatment. With complete understanding and cooperation by the diabetic patient, the percentage of cases of diabetic gangrene may be gradually reduced and the number of legs amputated for this condition correspondingly decreased.

"The FAT OF THE LAND" (Continued from page 413)

yield but 90 calories) because he fears obesity. He may sit at the table with an air of near martyrdom watching his comrades enjoy these low-caloried delicacies while he takes in hundreds of calories by eating hard rolls and butter. At the conclusion of the meal, he feels that he has dieted properly. The veritable cause of obesity is overeating. Its cure is abstemiousness. If a person pleads that he eats practically nothing and still gains weight, the listener may be assured that the speaker is deluding himself. The physiologists have known for most of this century that "weight producing substances cannot be absorbed through the skin or inhaled." They are always acquired by swallowing.

It is perfectly true that occasionally the obese person does not take more food than his slender dinner companion. But by and large, day in and day out, the reverse is true. Different individuals may have diverse capacities to utilize ingested food. We may theorize that a thin person will find but 75 per cent of the food value of a meal useful to his body, while an obese friend at the table will ultimately utilize 95 per cent of the caloric value of the same food mixture. This is due to a peculiar and innate metabolic level, which is fairly constant in an individual but which varies from person to person. Physiologists recognize this difference in metabolic powers. That person is fortunate whose established metabolic status allows him to take unusually large meals without readily gaining excess weight.

Satisfaction forms a large part of the joy of living. In the obese, satisfaction may be gained by eating. Without more and more food to satisfy this strong desire, such people become extremely miserable. It is, therefore, far easier for them to continue to be satisfied than to punish themselves by abstinence. There is an increasing acceptance of the view that fatness *per se* is a thing to be avoided, but the acceptance is too passive. The obese need to direct more effort and less conversation toward correcting their condition.

The problem of weight reduction is actually a scientific and mathematical one. The caloric values of foods can be determined from many sources. The kind and amount of food to be taken can be calculated by simple addition. After performing this elementary arithmetic, its application with a heavy dash of self discipline will enable an obese citizen to return to a normal weight. Such does not imply starvation. Food hobbies, faith in nonexistent "slimming" qualities of food and "curbstone" advice from well meaning lay friends have no legitimate place in the program. Food fallacies contribute to failure in an effort to reduce weight. One of the most widespread fallacies is that whole wheat bread can be taken where white bread is not allowable. The caloric values are the same.

The cocktail custom contributes to corpulency by furnishing both more calories and an increased desire for food. In part, the increased appetite is due to a dulling of the sense of satiety, or an unawareness of the discomfort in a distended stomach. Thus there is allowed greater distension by food, while the nervous system is under the influence of alcohol. Other physiologic mechanisms are stimulated, which in the aggregate, means intensified appetite for food. An ounce of whisky contains 70 calories of fuel, the equivalent of a large slice of bread. A glass of champagne contains even greater value. Beer furnishes only slightly fewer calories than whole milk, volume for volume. A bottle of beer contains more weight gaining properties than three slices of bread, a liberal bread supply for any one at a single meal.

An attribute of man is his power to distinguish right from wrong. The race should be increasingly conscious of its privilege to choose between alternatives in habits for the future betterment of the individual and the race. Mass experiments in controlling political and social environment are outgrowths of the recognition that man might well use his relatively highly developed brain tissue in planning further advantages for himself and offspring. He thus hopes to avoid some of the costly haphazardness of the heretofore considered natural method. Nature is extravagant in biologic maneuvers under the principle of natural selection. Whole species of animal life have perished when and where they have failed to fit into existing physical requirements of the world. Yet man disregards this knowledge when it conflicts with appetite control.

Men and women are cognizant of the proportion and development of their bodies. If a person is above the limit of normality in weight, he may do one of two things. He may earnestly attempt to change his physical appearance, or finding such change inconvenient, he may persuade himself that all is well and do nothing about the excess of fat. The latter behavior involves considerable rationalization to conciliate one's conscience.

It is surprising that obese women are not more sensitive to their appearance. The women of middle age who seem most disturbed by esthetic considerations are almost invariably those whose weights are in the normal zone recognized by physicians and sanctioned by actuarial tables. The dangerously obese women seem strangely unconcerned. To an extent, then, the excessively obese mark themselves as having certain mental traits. They become members of a selective group, characterized in part by a disregard for personal physical appearance.

Excessive fat has been referred to as "a parasite which lives at the expense of its host, and contributes nothing to its upkeep except in time of extreme starvation." The man and woman approaching middle age should keep in mind the stubborn biologic fact that one cannot absorb weight from the air about him. All weight, normal or excess, is maintained by food that is eaten. There is no other source of flesh for man. Should not one of average intellect be willing and able to dignify the individual and the race by maintaining the conventional semblance of humanity?

Temper Tantrums

By **WILLIAM I. FISHBEIN**

THE crying spells of infancy, unless controlled, quickly develop into the fits of anger and temper tantrums of older infants and children. When an infant is restrained, he usually screams and strikes out with his arms and legs. For several months, anything which restrains him is likely to elicit crying and vigorous movements. Other emotions, such as fear, may produce the same reactions. It is not possible to tell from the reaction in an infant, the type of emotion that has produced it. Most emotions aroused by unpleasant experiences during infancy result in crying and random movements of the body.

As the child grows older, the emotional responses begin to follow more definite patterns. The child becomes angry whenever anything interferes with his movements or activities. He responds by crying, throwing himself on the floor, kicking and throwing things. Thus temper tantrums start. At first they are merely an expression of the infant's anger. Later, they become useful for obtaining something that the child wants.

Anger is a natural emotion, often useful, but harmful when it is uncontrolled. The parents' task in training the child is to teach him control of his emotions and to restrict his behavior to useful activities in response to these emotions. Temper tantrums are useless and destructive.

Various authorities suggest the following methods for curing temper tantrums:

1. Pay no attention to the child when he has a temper tantrum. Put him into a room where anything which he may destroy is out of reach, and leave him alone until the tantrum is over.

2. Pay more attention to the child's good behavior, less to the bad.

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3. Make sure that the child does not attain by the tantrum the object for which he is having it. If he has the tantrum to secure a bribe, give no bribes.

4. Control your own temper. Tantrums are often imitative.

5. Do not talk before the child about his bad temper or naughtiness.

6. Do not scold the child nor punish him for the tantrum. If left undisturbed he will quickly forget his anger. If you notice it, the natural reaction may soon be used as a means of tyrannizing you.

7. There are many legitimate reasons for anger. Try to keep these causes restricted to the minimum. Interfere as little as possible with the child's natural activities. Correct improper behavior promptly with as little fuss as possible. Do not permit today what will be forbidden tomorrow.

8. Look for any physical source of irritation, such as ill health. Remedy it, if any exists. Help the child with his difficulties, if he asks for help. Otherwise, control your annoyance, and take no notice of the child's temporary explosions of anger. He will rapidly learn that anger and tantrums do not secure for him the things he desires so will learn to control his anger and employ himself with more useful behavior.

Breath holding is usually an outgrowth of prolonged periods of crying. During a crying spell, the child may hold his breath, long enough perhaps to lose consciousness momentarily. This occasions great concern on the part of the parent, who may rush to the child, throw cold water on him, pick him up or perform other useless motions.

The child quickly learns that breath holding is a means of securing attention and of obtaining other things he may want. Just as with temper tantrums, the cure is to make sure the child does not get the desired attention or other object he is seeking to attain.

When he thus holds his breath, it should be completely ignored. The spectacle of the breath holding child is an alarming one. Never, however, has a child injured himself during such an attack, and if left alone, the breathing begins normally in a few seconds.

An epileptic attack may be much like that of breath holding. The physician can easily differentiate them. Once having been assured that the child does not have epilepsy, cure the breath holding by ignoring it.

Fear is rarely a problem of great concern to parents in the first two years of the child's life. Fears are probably for the most part learned. It seems generally accepted that during infancy fear of falling and fear of loud noises exist. These fears may call forth the same emotional response as anger—crying, screaming and random movements of the arms, legs and body. Throughout infancy the child remains afraid of things which threaten his physical welfare and continues to express his fear in the same primitive fashion.

The expression of fear should grow as the child grows older, because it is intimately associated with self preservation and is necessary for existence. However, as with anger, fear may be excessive. The child may fear objects which ordinarily should not make him afraid. This excessive fearfulness may express itself as fear of death, failure or sickness.

BIBLIOGRAPHY ON CAMP MATERIAL

A new bibliography has recently been published on camps and camping, with the references selected by Mabel A. Badcock. These include general references to books and reports on the subject, periodical references and "classified references." This may be obtained for 10 cents at the Russell Sage Foundation, 130 E. 22nd St., New York City.

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QUESTIONS FROM MOTHERS

Speech Defect

To the Editor:—Can you inform me if it is possible to correct a slight lisp in the speech?

M. T., Illinois.

Answer.—If lisping is not due to physical abnormality it must usually be regarded as a habit. Most cases of lisping are due to habit and not to physical deformity.

If the habit of lisping is attacked sufficiently early, it can usually be overcome. A physical examination should be made first to be sure that there are no physical causes for the disease. When this has been ascertained, it becomes a question of training and the replacement of a bad habit with a good habit of speech. Speech training can usually be handled quite successfully by special speech teachers in the schools or sometimes through lessons in dramatics or in singing.

Practice is important and a positive attitude must be maintained. Merely nagging at a child will do no good and may do much harm.

Sleeping with Head Turned

To the Editor:—I have a 3 months old baby who is partial to sleeping with his head turned to the right side; in fact, he has made his head noticeably flat on that side. So far, I've been unable to induce him to sleep any other way.

C. M. B., Kansas.

Answer.—The condition described is common. The main thing to decide is whether there is a wryneck, or a tenseness of the muscles in the neck on one side that prevents the child from turning his head to that side. In all probability that condition is not present. Almost any baby that lies constantly on one side will flatten his head on that side. The only thing to do is to be sure that the baby gets cod liver oil, or other source of vitamin D, and that attempts are made to have him lie with the other side of the head down by so arranging his pillows. Also it is well to have the child sit propped up fairly early, say from the fifth month on. Unless there is a true wryneck, there is usually nothing to worry about, inasmuch as the condition will remedy itself when the child gets older and sits up more.

Inoculation

To the Editor:—When is it advisable for a baby to be inoculated, and is it considered dangerous?

T. B., Vermont

Answer.—A baby could take the preventive inoculation for diphtheria as early as 3 months, but the eighth month is the average choice. Properly administered, it is practically free from danger.

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The following brands of dessert products stand accepted by the American Medical Association's Council on Foods as of March 1, 1939:
CORNSTARCH DESSERTS
ANN PAGE SPARKLE PUDDINGS: Vanilla and Chocolate Flavors
KRE-MEL DESSERTS: Caramel, Chocolate, Coffee and Vanillin Flavors
GELATIN DESSERTS
JELL-O: Cherry, Lemon, Lime, Orange, Raspberry and Strawberry Flavors
JELL-WELL: Concord Grape, Lemon, Lime, Orange, Raspberry, Strawberry and Wild Cherry Flavors
KNOX-JELL: Lemon, Lime, Orange, Raspberry and Strawberry Flavors
ANN PAGE SPARKLE: Cherry, Coffee, Lemon, Lime, Orange, Raspberry and Strawberry Flavors
ICE CREAM DESSERTS
ANN PAGE SPARKLE: Vanilla and Chocolate Flavors
SHERBET DESSERTS
SUN JUCE Orange Base
RENNIN POWDERED DESSERTS
JUNKET TABLETS (unflavored)
JUNKET POWDER (sweetened and flavored): Lemon, Orange, Vanilla, Raspberry and Chocolate Flavors
JUNKET POWDER (sweetened and flavored and containing other ingredients): Vanilla, Orange, Lemon, Raspberry, Coffee, Caramel and Chocolate Flavors
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DESSERT PRODUCTS

EVERYBODY likes desserts in one form or another. Dessert is usually served as a "topper" to luncheon or dinner, and very often the dessert is held out as a reward for eating the more essential vegetables and main dish.

The Council on Foods of the American Medical Association has accepted several dessert products, which the Council believes are wholesome foods and which have special usefulness in the preparation of pleasant desserts to appeal to the appetite of many persons.

Plain granulated gelatin, which may be combined with other ingredients in the preparation of desserts or other food dishes will be discussed in a subsequent article in HYGEIA.

For purposes of this article accepted dessert products may be classified into five groups:

(1) *Cornstarch desserts,* consisting of a mixture of sugar or dextrose, or both, cornstarch, flavoring and U. S. Department of Agriculture certified food color.

(2) *Gelatin desserts,* consisting of sugar, gelatin, tartaric acid, U. S. Department of Agriculture certified color and fruit flavors.

(3) So-called *ice cream dessert,* consisting of powdered mixture of sugar, skimmed milk powder, vanilla extract, a small amount of karaya gum, certified color and salt.

(4) *Sherbet desserts,* consisting of a powdered mixture of ground unpeeled oranges, dextrose, water, citric acid and citric pectin.

(5) *Rennin powdered desserts,* consisting of sufficient rennin to change one pint of milk into a custard-like dessert in three minutes at 109 F., and mixed with sugar and various flavors.

Although one can always make appetizing desserts from various ingredients on hand, these products simplify the preparation. All that is required is a specified amount of milk or water. They are packed in convenient sized packages. Each package contains enough material to make dessert for four persons. The directions for preparing a dessert from each product are printed on the package.

The cornstarch dessert products are modern versions of "blancmange," that smooth, delicious pud-

ding of grandmother's day. Failure to cook a blanc-mange without lumps was a source of despair to many amateur cooks. These fabricated cornstarch dessert products simplify the preparation, because in the manufacturing process the cornstarch and sugars are so thoroughly mixed that when the milk is added the starch granules do not adhere and form little lumps when the pudding is cooked, as so frequently happened with the older recipes. All that is required is the addition of 2 cupfuls of milk to each package and cooking over low heat, stirring constantly until thick.

Gelatin dessert products might well be called the chameleons of foods because of their many colors. Those accepted by the Council are available in six fruit flavors and colors. The colors simulate the color of the fruit whose flavor is imparted to the gelatin and sugar mixture. They may be served plain or in combination with fruits, such as bananas, canned pineapple, apples and other fruits according to season and preference. Fresh pineapple cannot be used, because it contains an enzyme that liquefies the gelatin and prevents it from setting firm.

The so-called ice cream and sherbet desserts are useful in preparing appetizing frozen desserts in an automatic refrigerator. Both of these products contain ingredients (karaya gum and pectin) that prevent the formation of large ice crystals when the product is frozen without stirring in a freezing tray of an automatic refrigerator. They require only the addition of milk or whipped cream or both.

Rennin powdered dessert products are available with and without sugar and flavor. The unsweetened tablets are useful in preparing a custard-like milk dessert for persons on carbohydrate restricted diets and for young infants and children. The flavored and sweetened rennin products require only milk for making flavored and sweetened desserts. The orange, lemon and raspberry flavored powders are artificially colored with U. S. Department of Agriculture certified colors and the coffee flavored powder with caramel color. While the rennin enzyme does not add to the fuel value of milk, it does make it more wholesome because the rennin enzyme performs the first step in the natural process of digestion of milk.

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They can be used for superficial scalds and burns as a wet paste—also, when prescribed, for relief from hyperacid types of indigestion, as a cleansing vaginal douche, to relieve the itching of eczema and other skin affections.

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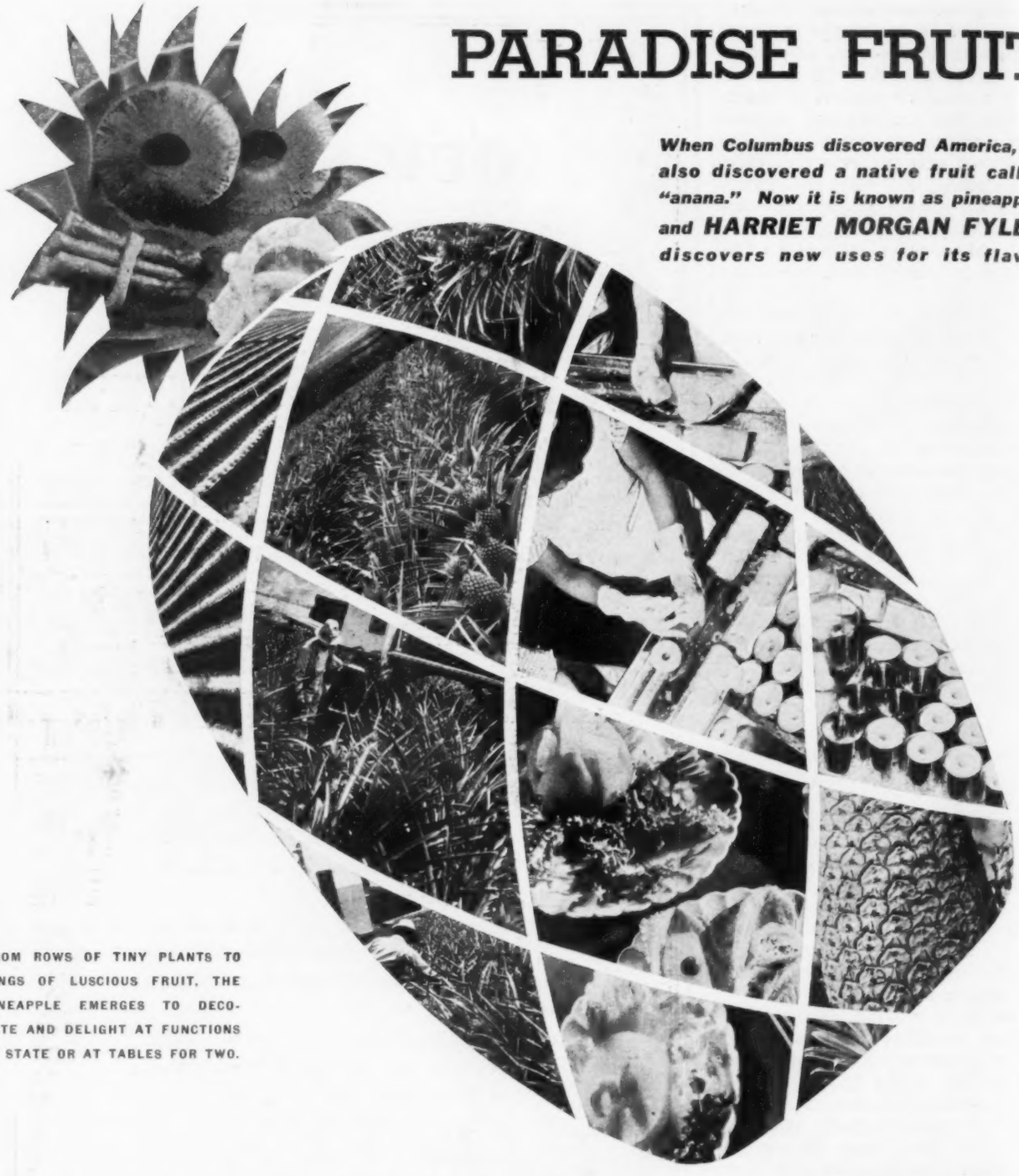
When Columbus discovered America, he also discovered a native fruit called "anana." Now it is known as pineapple, and* HARRIET MORGAN FYLER *discovers new uses for its flavor



FROM ROWS OF TINY PLANTS TO RINGS OF LUSCIOUS FRUIT, THE PINEAPPLE EMERGES TO DECORATE AND DELIGHT AT FUNCTIONS OF STATE OR AT TABLES FOR TWO.

THE pineapple is a native of Central or South America, where it had been cultivated for centuries even before the discovery of America. When the Spaniards first reached the West Indies they found the natives cultivating a luscious fruit which they called *anana.* Struck by its resemblance to a giant pine-cone in form, the Dons christened the new fruit *pina,* which the English translated to "pine," and to distinguish the fruit from the evergreen tree, they added "apple."

Although the pineapple is referred to as a fruit, it is really a collection of small fruits each with its own core and spiny bracelet marking the spots where the flowers appeared. The mature pineapple is shaped like a large pine-cone, about 6 to 10 inches in height and about 5 to 8 pounds in weight. The rind, which is usually sliced off with a sharp knife, is tough and horny and composed of small hexagonal sections fitted together like pieces of tile. Each of these sections marks a botanically individual fruit. The color of the skin when ripe is usually bright greenish orange, shading to yellow-green or dark green. The flesh is juicy, and it varies in color from white to deep yellow. The edible portion of the fruit surrounds a tough central core which was originally the flower stalk.

The season for this delicious fruit is from February to July. Puerto Rico and Cuba supply us with practically all the pineapples we see

in the markets during these months. Most of the Hawaiian pineapples reach us in canned forms because of the great distance and expense of maintaining proper temperature en route. Hawaii has been called "the pineapple's paradise." They grow in waist-high nests of spiked leaves, one "pine" to the plant. When exactly ripe, they are plucked by hand and hustled off to the cannery. There they are fed to a marvelous machine, which operates with almost human intelligence. Fitting its "fingers" to each size of pineapple, the machine cuts from it a cylinder of a given diameter, extracts the core, trims the ends and passes the fruit on to the slicing machine. Some of the fruit is sliced; the rest is cut in smaller pieces and packed as tidbits, gems, spears and crushed fruit.

Canned pineapple juice is the brain child of the depression. Casting about for a new product to get rid of surplus pineapples, canning companies determined to find out how to extract the juice. No one had ever succeeded in doing so, because the cells containing the juice were too small and tough to be broken with an ordinary press. When sharp quartz crystals are mixed with the pulp before pressing, however, all the tangy juice is released.

Pineapple is a good source of vitamin C and contains some vitamin A. Pineapple juice has a higher calcium content than most other fruit juices and contains some phosphorus and iron.

Pineapple has long been valued for its distinctive flavor and refreshing qualities. It can be used in as many dishes as the more common peach and may be eaten fresh, preserved or canned at breakfast, luncheon or dinner. Pineapple combines well with such vegetables as carrots and cabbage in salads and with such fruits as the avocado and banana. Fresh pineapple must be cooked before being added to a gelatin solution because the protein-splitting enzyme, bromelin, present in uncooked pineapple will prevent the gelatin from congealing.

Avocado Pineapple Salad

Shred a head of lettuce and place on salad plates. Arrange a slice of pineapple with cottage cheese, mayonnaise and a dash of paprika on one side, and place a fan of avocado slices on the other.

Will you join PATTY ON A PICNIC?
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Patty's ready for a picnic on Waikiki Beach at a moment's notice. She just picks up her sand bucket and spade and her can of Dole Pineapple Juice (she'd sooner leave her bucket behind than her favorite drink!) and she's off.
Maybe, for a while at least, you'll have to do without the warm sun and sand that Patty enjoys in Hawaii—but you can always enjoy Patty's own fruit juice, Dole Pineapple Juice from Hawaii.
Indoors or outdoors, hot days or cold, you can have a picnic any time with Dole Pineapple Juice. It's a keen drink—and mothers know it's good* for you. Dole is just the juice of delicious, ripe pineapples with nothing added.
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Pineapple Bavarian Cream makes a good light topping for a heavy meal.

Pineapple Bavarian Cream

1 tablespoonful granulated gelatin
1 cupful crushed pineapple
¼ cupful cold water
Juice of ½ lemon
½ cupful sugar
1 cupful of whipping cream
Pinch of salt

Soak gelatin in cold water. Heat pineapple, add sugar and lemon juice, and pour over gelatin. Set in pan of ice water. Stir until it begins to thicken, fold in cream whipped until stiff. Turn into mold and chill.

Baked ham and sliced pineapple have been keeping company for years, but pineapple fritters and ham also make a good match.

Pineapple Fritters

6 slices of canned pineapple, drained
1 cupful sifted flour
1 teaspoonful baking powder
½ teaspoonful salt
1 egg
1 tablespoonful melted butter
½ cupful milk

Cut pineapple slices in half, and dry. Mix and sift flour, salt and baking powder. Combine egg yolk, milk and butter. Add dry ingredients alternately with milk and egg mixture. Beat until smooth. Fold in egg white, beaten until stiff but not dry. Dip pieces of pineapple in the batter. Fry in deep fat (heated to 375 F., or until a cube of bread will brown in about one minute) until brown. Drain on unglazed paper. Sprinkle with powdered sugar. Serves six.

Pineapple Ice Cream

1 pint of milk
½ pint of whipping cream
1¼ cupfuls sugar
1½ teaspoonfuls vanilla
3 egg whites, beaten stiffly
1 cupful crushed pineapple

Beat the milk, cream, sugar and vanilla together in a bowl. Transfer to the freezer can, pack freezer with three parts of cracked ice to one of salt, and begin to freeze. After turning for about 8 minutes, or until the mixture is frozen to a mush, add the egg whites and crushed pineapple, and finish freezing. Pack freezer well with ice and salt, and let stand for 3 hours before serving. This makes 2 quarts.

Pineapple Whip

1 package of lemon flavored gelatin
1 cupful hot water
1 cupful pineapple juice
½ cupful whipped cream
1 cupful crushed pineapple

Dissolve the gelatin preparation in the hot (or warm) water as directed on the package. Add the pineapple juice. Cool until sirupy; then beat with rotary egg beater until of consistency of whipped cream. Fold in whipped cream and crushed pineapple. Turn into molds. Chill until firm. Unmold, and garnish with pineapple tidbits.

Baked Crushed Pineapple

Drain juice from a can of crushed pineapple, size No. 2, and sweeten with ¼ cupful brown sugar; add 1 tablespoonful of vinegar. Put into a baking dish, and bake until browned. This is excellent with broiled ham or game such as rabbit or duck.

Pineapple Tapioca

5 tablespoonfuls of quick-cooking tapioca
½ teaspoonful salt
1 pint of hot grape juice, white or red
½ cupful sugar
1 cupful shredded pineapple
1 cupful quartered marshmallows
Macaroon crumbs

Cook the tapioca and salt in the hot grape juice in a double boiler for 15 minutes, stirring frequently. Stir in the sugar. Remove from heat, and add pineapple. When partially cooled, stir in the marshmallows. Place a few spoonfuls of macaroon crumbs in a glass bowl or individual glasses, pour in mixture, chill, and serve with whipped cream.

A refreshing food drink. Full-bodied richness! Never thin or watery! High vitamin content!

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HEALTHGRAMS

FROM ARTICLES IN THIS ISSUE

¶There is no child so unfortunate as he who is robbed of his natural birthright, an unbroken home. *See page 396*

¶The subject of electricity in medicine is an inspiring demonstration of how progress is interlinked, not only in the arts and sciences, but with other fields all over the civilized world. *See page 402*

¶Educating the public in matters of health is best effected through the process of visual teaching. *See page 408*

¶Excessive fat has been referred to as "a parasite which lives at the expense of its host, and contributes nothing to its upkeep except in time of extreme starvation." *See page 411*

¶Gangrene simply means dead tissue produced as a result of interference with its blood supply. *See page 415*

¶The state of the child's mind which impels him to learn about things by questions and investigation is normal and healthy, even if at times he may seem to parents to be obsessed. *See page 469*

¶Anger is a natural emotion, often useful, but harmful when it is uncontrolled. *See page 449*

¶Personality changes not infrequently follow prolonged illnesses, which invariably and quite naturally put the person in an abnormal or at least an unusual relationship with the rest of the family. *See page 460*

¶A well child is a dynamic creature with great potentialities. *See page 430*

¶Maternity is an age-old mystery, so overwhelming that folklore and superstition surround it on every hand; and so each old wife has her choice bit of misinformation which she feels duty bound to give the newly pregnant woman. *See page 403*

SALLY: Perhaps you've heard about Post's 40% Bran Flakes, Dot! The most marvelous-tasting breakfast cereal you ever put in your mouth!

DOT: Goodness—it *must* be delicious for you to be so enthusiastic about it, Sally!

SALLY: Yes, and Post's Bran Flakes are *much more* than a wonderfully fine-flavored cereal—They give you two important *extra benefits* . . .

First, Post's Bran Flakes provide just enough bran, a *natural* regulator, that helps protect you against sluggishness. People whose systems are irregular, due to lack of bulk in the diet, find Post's Bran Flakes, eaten daily, a wonderful help.

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SIX MONTHS LATER . . .

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SALLY: And you're a different girl, too! Isn't it wonderful to find a cereal that tastes so delicious and gives those *extra benefits,* too!

IMPORTANT: Post's Bran Flakes, due to their bulk, are a regulative cereal. Constipation due to insufficient bulk in the diet should yield to Post's Bran Flakes, eaten regularly—as a cereal or in muffins. For cases not corrected in this simple manner, a physician should be consulted. Post's Bran Flakes are a Post Cereal—made by General Foods.

QUESTIONS AND *Answers*

Polaroid Glasses for Night Driving

To the Editor:—Would it be safe for me to use a pair of polaroid eyeglasses for night auto driving? Can I be sure these eyeglasses are not injurious to the eyes?

E. N., Washington, D. C.

Answer.—It is not wise to use polaroid glasses for night auto driving. They diminish the light that comes into the eye from the things that you want to see, as well as the glare of the headlights that you wish to avoid. If the light from headlights was always polarized at a certain angle, and your glasses were adjusted for that angle, there might be some advantage in polaroid glasses. But of automobile headlights, not one in 10,000 gives polarized light; and in that case the glasses would not help you at all, unless you had them turned exactly to the corresponding angle.

Fluoroscopy of the Fallopian Tubes

To the Editor:—My wife was examined by a doctor with a fluoroscope to see whether her fallopian tubes were obstructed. I thought that these organs could not be seen with a fluoroscope, but only with the x-rays.

G. L., Michigan.

Answer.—It is possible to see the fallopian tubes with the fluoroscope, which is a means of x-ray study just as much as is the use of x-ray films. With the fluoroscope, the work is done in a darkened room, and the image cast by the x-rays is seen on a specially coated fluorescent screen instead of being recorded on a specially coated photographic film especially prepared for use with the x-rays. If a preliminary injection has been made into the uterus and tubes, employing a liquid opaque to the x-rays, it is possible with the fluoroscope to see whether or not the fallopian tubes are open. The use of x-ray films gives considerably more accuracy to the detailed findings, and it also affords a permanent record; whereas the fluoroscopic examination affords immediately available information from moment to moment during the injection. Most physicians doing this type of examination utilize both the fluoroscopic and the film study in combination with the injection.

Some physicians employ the Rubin test when examining patients with the fluoroscope. Gas is injected into the uterus under slight pressure measured with a pressure-registering apparatus, and with the fluoroscope observations are made to see whether gas appears under the diaphragm. If so, then it is evident that there is at least one open fallopian tube. This method does not give information as to which tube may be obstructed; whereas with the use of opaque oil for the injection, it is possible to obtain detailed information about the condition of the uterine fundus and of both tubes.

Effect of Continuous Inbreeding

To the Editor:—Will continuous inbreeding weaken the strain?

F. Z., New Jersey.

Answer.—That inbreeding in itself is not necessarily harmful is clearly shown by the fact that such successful plants as wheat, oats, peas and beans are naturally self fertilizing. Our pedigreed strains of horses, cattle, sheep and other valuable domesticated animals, furthermore, have been developed in part and standardized through close inbreeding.

Inbreeding tends to establish homogeneous, true-breeding strains. Notwithstanding these facts, it is true that inbred stocks taken at random, without knowledge of their ancestry, will generally degenerate, unless rigorous weeding out of the more undesirable offspring is practiced in successive generations. The reason lies in the fact that many undesirable characteristics from either line of ancestry remain unexpressed as long as they are matched in the offspring by a desirable, so-called dominant, trait from the other parent in the mating. Since closely related forms are likely to carry the same hidden defects, undesirable characters are much more likely to come to light when such individuals are bred one to another.

Acme

WILL THE USE OF FLASH LAMPS CAUSE CATARACT?

Syphilis

To the Editor:—A speaker before a college graduating class made the statement that "eleven out of twelve raving maniacs caused by syphilis could be cured." I have been teaching large groups of college people in our institution that syphilis is relatively easy to cure in the primary stage and the early part of the secondary stage, very difficult and many times impossible to cure in the tertiary stage and impossible to cure when gummas are present in the brain or spinal cord. I have understood from those in charge of our state hospital for the mentally ill that there is no possible cure for those who are insane as a result of syphilis. Is this true? J. G. N., Oklahoma.

Answer.—The inquirer is probably correct in stating that syphilis in the primary stage is curable, and in the secondary stage likewise curable, or certainly checked, so that it need not cause the patient any difficulty the rest of his life. There are many manifestations of syphilis in the tertiary stage that are likewise quite amenable to treatment. The disease may not be cured in the sense of the organisms being entirely destroyed, but a large proportion of these patients may be rendered so well cured that they will have no further difficulty with it the rest of their lives.

The remark about gummas in the brain and spinal cord is difficult to answer. The real gummas are not so common in the brain and spinal cord. If they are discovered early, they respond readily to therapy, and then the syphilis of the vascular system that is at the base of these gummas may be handled later and should respond in a fair proportion of the cases. The difficulty about the gummas is that one often gets pressure symptoms in connection with them, particularly in certain vital spots, so that there may be paralysis of the lower limbs if there is a gumma of the spinal cord, or disturbance of vision if there is a gumma present on the optic nerve.

It is felt that as far as paresis is concerned, with the new methods of therapy that are now at hand, about 50 per cent of the patients may be so much benefited that they will be able to return to the ordinary walks of life and to their previous occupations; although it is of course not possible to cure them as completely as it is done in the early stage of the disease.

Cataracts from Flash Lamps

To the Editor:—I have heard that flash lamps used in making a picture in front of a baby would cause a cataract. Is this true? P. S., New York.

Answer.—The statement that flash lamps may cause cataract is entirely without foundation. Cataract produced by light or heat is caused only by long exposure with either a high degree of infra-red ray or with ultraviolet rays. True exposure to very bright light may cause death of the retinal tissue. This is seen at times in eclipse blindness and in snow blindness. There is no reason to believe, however, that the short exposure of a flash lamp could in any way cause this condition.

Water Supply from Wells

To the Editor:—Will you please tell me whether there is any necessity for cleaning and whitewashing the walls of a cement-lined well that is carefully covered? The well receives its supply of rain water from a broad roof that is painted white. The spout is carefully screened so that a minimum of leaves and pine needles find their way into the well. When the well was first built, it was cleaned and whitewashed every other year. The well has not been cleaned or whitewashed now for five or six years. What is the origin of the practice of cleaning and whitewashing such a well? If it should be done, why, and how often? D. M., Pennsylvania.

Answer.—From a sanitary standpoint there is no necessity to whitewash the inside of a covered cement-lined water cistern, although it might possibly be a convenience for visual inspection purposes. An annual inspection and cleaning of a large cistern may be advisable, but extreme care should be taken at the time to prevent contamination of the cistern by the person who enters it. Ordinarily a small household cistern can be drained, inspected and cleaned without any one's entering it, which is advisable.

A new remodeled cistern should always be sterilized before being put into use. This can be done by carefully washing the walls with a chlorine solution (200 parts per million to 300 parts per million) followed by thorough rinsing and flushing to remove any excess chlorine.

Since "soft" rain water often has chemically active properties, it is advisable to avoid the use of lead pipes, gutter drains and lead paint on the collecting roof or inside the cistern, if this water is to be used for drinking or culinary purposes. If this is not done, the lead may be dissolved in the water and cause lead poisoning in those who drink it.

Openings to cisterns should be carefully screened to prevent the entrance of insects and rodents. An underground cistern should be distant from any sewers or drains. If this is not possible, the sewers should be of cast iron pipes with carefully caulked and leaded joints. The cover should be overlapping and sealed and locked. It should be at least 18 inches above the ground and be well above high water if in an area subject to flooding.

Vomiting in Pregnancy

To the Editor:—Could you tell me if there has been any recent development in the treatment of pernicious vomiting of pregnancy? Mrs. C. F., Canada.

Answer.—Great improvements have taken place in the treatment of the vomiting of pregnancy during the last five years, and there are several remedies and also a distinct regimen, which have proved successful. It often completely wards off the disease in some women and in nearly all cases renders her much more comfortable.

In addition to sugar solutions and salt solutions given by injection into the vein and under the skin, we have other ways of introducing fluids and food. Also, there are some newer medicaments on the market as well as certain glandular products, which are proving of great efficiency.

Most important is to put the patient in the charge of a physician at the beginning of pregnancy before the sickness becomes too firmly seated.

Effect of Spinal Meningitis on Personality

To the Editor:—I have a son, aged 12, who contracted a case of epidemic spinal meningitis when he was 7½ years old. He was not crippled, but the illness seemed to change his disposition entirely. From a sunny, cheerful child he became irritable, easily angered and cried a great deal, something he had never done. He contracted a severe case of scarlet fever the following year. He was bedfast three months, then had an operation to remove his tonsils and adenoids; but because of his heart condition he was quite inactive for another three months. Now he is well and strong again, but he has great difficulty conforming to school discipline. He seems uninterested in his studies, although his teachers, principal and superintendent tell me that he is undoubtedly the brightest child in the entire school and can lead his classes at any time he chooses. I find it extremely difficult to get him to sit down to study; he would much rather play ball, ride his bicycle, make airplanes or anything else with his hands. He barely passes in most of his subjects and has to take special work in summer school or tuforing to get by. He really is different—brave, chivalrous, polite, affable, morally clean, of very good character; and still he doesn't conform socially or to school rules. Did his illness really change his disposition? I feel that it is entirely my responsibility. He is really not a good sport. He has a brother who will be 8 years old in August, and he is entirely different. He has been no problem at all; but the older boy has been extremely jealous of him, saying we think he is "an angel." We don't, and he isn't an angel—a husky lad, all boy, weighing 80 pounds, full of the joy of living.

They are really happy children, but there is something lacking in the older boy. He is careless about his clothing, inconsiderate of others and disorderly about the house, and he never returns anything to its proper place; but I have always considered these traits more or less normal in a boy and, not being of a nagging disposition, have let him get by with it. The younger son is very neat and careful and considerate of others. I become terribly annoyed with the older boy but find it easier to pick up things and straighten up after him than to quarrel about it. The teachers tell me that there is no provision made for a bright child in the schools here, that the stupid, slow child gets all the consideration, saying that they feel they "just must pound something into a stupid child's head some way to pass him on" while the bright child is left to shift for himself. Consequently he gets into mischief and disturbs the class around him.

M. J. G., Kentucky.

Answer.—From the data presented there is no evidence that the various illnesses to which this lad has been subjected can be looked on as the cause of his personality change. There is no disease process nor is there evidence that any scars have been left to account for his present difficulties. It is well to consider at the same time that there are many children who find it difficult to concentrate, who are restless, who are more interested in baseball, bicycles and airplanes than they are in history, composition and algebra and who have never been subjected to either illnesses or accidents. Personality changes, such as those described, not infrequently follow prolonged illnesses, which invariably and quite naturally put the child in an abnormal or at least an unusual relationship with the rest of the family.

It is not difficult to appreciate that the oversolicitous attitude which the parents have toward the child who is seriously ill, especially where this illness is prolonged, naturally tends to give the child an exaggerated idea of his own importance during this formative period. During the illness and the prolonged convalescence, the sick child becomes the center of the stage. Everything is his to accept or reject as he sees fit, and not infrequently the whole household revolves around his whims. It is not surprising that the child living under such conditions over a period of months and sometimes years becomes selfish, self centered and often extremely demanding on his environment. During these important years he has not been subjected to the routines which are essential to the ordinary, everyday living; that is, those activities which demand concentration, the ability to stick on the job when one is inclined to turn to other things, as well as the ability to postpone the desires of the moment for something that is more worth while later on.

All these tendencies are to a large extent developed by the personal contacts and adjustments that children have to make, one with another, during the early years. If they are not acquired during the first six or eight years of life or if some unusual situation intervenes, which interrupts and prevents these normal contacts with other children, they must be acquired at a later date. It does not necessarily mean, however, that these personality traits and habits and attitudes toward life cannot be developed later.

The mother states that he is really not a good sport and then goes on to extol his 8 year old brother. Good sportsmanship is exactly the thing that this lad has not had the opportunity to develop. To be a good sport, one has to learn how to meet failure, disappointment, defeat in games and so forth. This is the problem that is confronting this boy at the moment. It would be well to keep in mind in dealing with these two boys in the home that privileges and responsibilities should be carefully weighed; that is, that the older boy should understand that by virtue of his age he is entitled to more privileges, but with the enjoyment of these privileges go certain responsibilities.

The mother is unduly concerned about her problem, and much of this concern centers around the fact that she blames herself for the boy's lack of responsibility. The mother must understand that the problems which cause her so much concern are, after all, not particularly unusual and that many children are irritable, purposeless in their activities, careless and inconsiderate at 12, and are perfectly well ordered young people at 16. Many of the habits that annoy the mother are relatively unimportant and are, after all, just shifting standards

which society has placed on conduct. Then, too, this 12 year old boy undoubtedly suffers by comparison with his younger brother, who appears to be unusually, if not abnormally, neat and careful, considerate of others and perhaps unduly concerned about approbation.

If circumstances permit, the lad should get away from home, perhaps going to a small school where he could have some personal help with his work and a sympathetic understanding of his personality problems. Being away from home and coming in contact perhaps with men teachers in a well organized institution would give the boy an idea of the necessity of conforming to rules and regulations which are imposed on the group and not on him as an individual. His problem would be handled in a more objective way than his mother could possibly do in her present state of mind, and he would no longer find himself in competition with and suffering by comparison with his younger brother. A school would offer opportunities of building up his self confidence and allowing him to develop his intellectual abilities and would open up new opportunities where his interest in athletics and his excellent coordination, as manifested in his mechanical ability, could find outlets. More individual attention could of course be given the boy in a good private school, and he would be less likely to be subjected to the overworked, tired, irritable type of teacher, who has already admitted there is no place for this type of child in the particular school which he is attending.

Prolapse of the Rectum

To the Editor:—What treatment other than surgery is helpful for prolapse of the rectum? What causes this trouble? Is it an unusual condition? Is it serious?

N. M. C., Missouri.

Answer.—Prolapse of the rectum may be serious, or it may be of relatively little consequence. The seriousness depends entirely on the extent and the cause.

Prolapse is due to a variety of conditions, among the commoner causes being weakness of the muscles which form the floor of the pelvis or the presence of small tumor masses in the wall of the bowel, such as hemorrhoids, which have a tendency to cause extrusion of a portion of the mucous membrane. Loss of weight and poor muscular tone also have a tendency to cause prolapse, as does chronic irritation of the bowel with resulting diarrhea. When prolapse is extensive, surgical intervention is necessary. When prolapse is due to relaxation of the muscular coats of the bowel itself and is not extensive, local injection treatments are often followed by satisfactory results. Treatment for chronic irritation of the bowel and improvement of the general condition of the individual are of assistance in mild cases. When prolapse of mild degree occurs at infrequent intervals, local gentle cleansing of the parts with soap and water and replacement of the bowel after lubrication with Vaseline may be all that is required.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

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BOOKS ON HEALTH

Babies Are Human Beings

By C. Anderson Aldrich and Mary M. Aldrich. Cloth. Price, $1.75. Pp. 119. New York: The Macmillan Company, 1938.

THIS is a story of the psychology of infancy as related to the baby's growth and development, written in nontechnical language. The material has been culled from the technical works of many well known child psychologists. The authors state that they have attempted to select from the complicated processes, which these observers have so painstakingly revealed, a few of the simpler and more relevant facts of growth and to present them as a means of understanding babies. They contain no specific instructions or formulas except where development furnishes its own formula.

The author urges that in our management of the infant we be less rigid, take our cues from the baby himself as he pursues his developmental course and urge conformity on him at periods when he is ready to accept. Then we will be collaborating with growth, and his compromise will be on a more reasonable and satisfying basis.

An appendix consists of a developmental schedule modified from Gesell for those who wish to have in more concrete form the general sequence of emerging accomplishments in the first two years.

If it is true that much of the neurotic trouble of adults is the fruit of a frustrated infancy, and that any drastic upheaval in the child's life at so early an age may be the basis for neurotic tendencies later in life, this book should do much good in preventing these neuroses, by not following the inflexible regularity of infant training as so commonly preached at present. Progressive education applied to school children is essentially waiting until a child reaches the stage of development when he can master a subject easily before attempting to teach it to him. Progressive education should begin at birth by observing growth and the rhythm of development of every function and fitting his training into these. If he is not ready for any particular feat, wait a few weeks or months, as forcing may delay complete control.

JOSEPH K. CALVIN, M.D.

Eat and Keep Fit

By Jacob Buckstein. Cloth. Price, $1. Pp. 128. New York: Emerson Books, Inc., 1938.

THIS is a book that the physician who himself is well informed in matters of nutrition will be glad to prescribe for reading for his patients. It is authoritative, essentially accurate and well written, giving much necessary information to guide the layman in the selection of food for maintenance. Safe advice and sufficiently specific directions for reducing are also included. The only serious criticism it may encounter is of being somewhat too technical, perhaps, for the unintelligent, but then none but the intelligent—not necessarily the educated—ever profit much from books anyway.

RUSSELL M. WILDER, M.D.

How to Suntan for Health and Fun

By Allen Klein, Ph.G., and Lucius Herz, M.D. Cloth. Price, $1. Pp. 135. Emaus, Pa.: Rodale Publications, 1938.

THE advertising on the book's wrapper informs the prospective reader that "'How to Suntan for Health and Fun' enables you to enrich yourself with all the benefits of precious life-giving sunshine. Two eminent authorities give simple, detailed instructions on how to acquire a healthy coat of tan without red, raw burns or blisters. After reading this book you can enjoy your vacations to the full and

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"I DIDN'T THINK YOU'D MIND, DOCTOR. I WAS HUNGRY."

be a healthier, happier person." The book attempts to give this information under the guise of a scientific treatise when the simple admonition of timing one's exposure to the sun and avoiding the hottest sun at noon in a sensitive individual would suffice in the majority of instances.

On page 3 the authors state "that the skin is so mysterious in its workings that medical science does not know the half nor even a twentieth of it." After carefully reading the scientific portion of the book the reviewer feels that the authors belong in the latter category.

Under "Breathing" the statement is made that "The skin helps the lungs in their job of supplying the body with oxygen and, like the lungs, throws off carbonic acid gas." The respiratory power of man's skin is insignificant as compared to that of the amphibia.

Chapter five, entitled "Too Much of a Good Thing," is an emphatic warning against overexposure to the sun.

The reviewer agrees that "a great deal of the good derived from sun baths is due to the fact that they are taken in the open." This coupled with the "vacation frame of mind" and attitude of relaxation on the part of the participant contributes in no small measure to the beneficial effects of exposure to the sun, of which tanning is only a comparative cosmetic consequence.

When one sees the extent and expense to which people go to vacation and expose themselves to the sun it is realized that such a book will intrigue the public by its title; and while it does contain some practical information, it is to be criticized for the loose and inaccurate nature of the presumed scientific discussions.

MAX WIEN, M.D.

Science for the Citizen

By Lancelot Hogben. Cloth. Pp. 1082. Illustrations, 480. New York: Alfred A. Knopf, 1938.

"SCIENCE for the citizen" is a book full of useful information. Those who are not mathematically gifted, either with or without the author's contribution of "Mathematics for the Million," may find the astronomical and chemical sections "heavy-going." The section on public health and preventive medicine is reasonably complete, well written and fairly simple; but it is by no means adequate for more than a superficial understanding of the subject, its functions and its relationships to its environments.

The most interesting thesis in the book is that which forms its basic motivation, namely that social necessity is the mother of invention and that scientific progress is without significance except as it is related to community needs. This is not a particularly new conception, except that the author attempts to show, and in a great measure succeeds, that scientific progress, even when all the elements for its development are at hand, does not occur except under pressure of social necessity.

For any one who has the time and inclination to apply himself, this should be an excellent popularized textbook. Its style is lively, vivid and interesting, and its titles are intriguing as, for example, the chapter headings "Polo Star and Pyramid," which deals with the development of time estimation and the calendar; or "Spectacles and Satellites," which follows the trail of the telescope; "The Dark Satanic Mills," which outlines the superfluity of mere toil, or "The Waves That Rule Britannia," dealing with radio. Answers to examples and an extensive index are to be found at the end of the book. Illustrations are numerous, being mostly diagrammatic demonstrations of examples; they are very clear and well devised. A few woodcuts and photographs help to enliven the volume.

W. W. BAUER, M.D.

Prediction and Prevention of Reading Difficulties

By Margaret A. Stranger, B.A., M.A., and Ellen K. Donohue, B.S. Cloth. Pp. 191. New York: Oxford University Press, 1938.

THIS is a brief, well written book. It is divided into three parts: first "Theory," in which there are three chapters that discuss the neurologic basis of reading difficulties, the background for reading and evidence of reading difficulties in classroom behavior.

The second part, "Testing," has five chapters in which are given motor tests and tests of visual imagery, tests which the authors feel are necessary in order to diagnose the cause of the reading difficulty. Other chapters discuss how to record family history and give an interpretation of the test results.

The third part is "Teaching Procedure" to be used with children who have reading disabilities. This is divided into five chapters: first, the "Technique of Letter Introduction"; second, "Teaching Procedure"; third, "Teaching Devices and Drill Games"; fourth, "Speech and Confused Dominance," and fifth, "Conclusion and General Prognosis."

The authors emphasize the great number of children who pass through the public schools without acquiring the ability to read easily and smoothly. The authors accept fully Dr. Orton's theory of lack of cerebral dominance as the cause of reading disabilities. However, they say that no theory "can account for all cases of reading disability and no method of instruction can succeed with all children."

The authors take direct issue with those who feel that emotional disorders are the cause of reading disability. They say: "We know that serious reading cases are often accompanied by an emotional problem of some sort, and that many people are prone to place the blame for the reading disability on the emotional difficulty. That is, many psychologists and psychiatrists state that a child is not reading because of the emotional block. It has been our observation that the emotional disturbance, while real and important, is more often a result than a cause of reading difficulty."

My experience has been quite different from that of the authors. I found in the psychiatric and psychoanalytic study of children and adults many cases of specialized disability in reading, spelling and arithmetic which are caused primarily by emotional blocking.

However, whatever the authors' theories may be, their practice is quite sound, and this book can be recommended to parents and teachers who must deal with children who have reading disabilities.

SMILEY BLANTON, M.D.

[NOTE.—Books reviewed or mentioned in this section, other than those published by the American Medical Association, should be ordered from booksellers or direct from the publishers. They may not be ordered through HYGEIA or the American Medical Association. Publishers' addresses will be found at the end of the section.]

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American Red Cross Swimming and Diving

The American Red Cross. Paper. Price, 60 cents. Pp. 271. Illustrated. Philadelphia: P. Blakiston's Son & Co., Inc.

THIS manual takes its place alongside the companion volume "Life Saving and Water Safety," also published by the American Red Cross. It is a complete discussion of swimming and diving, from the most elementary considerations for the novice in the water to the detailed instructions for the learning of every style and stroke which the swimmer needs to know. It is clearly and concisely written and is well illustrated with photographs which show the various strokes by stages and portray the elements of diving from the simplest attempt of the beginner to the fully developed dive from a height.

W. W. B.

The Troubled Mind

By C. S. Bluemel, M.D. Price, $3.50. Pp. 520. Baltimore: Williams & Wilkins Company, 1938.

THIS book presents a parade of persons who have nervous and mental diseases. One by one they march by—those who have senile dementia, general paresis, melancholia, dementia praecox, hysteria and the other ills characteristic of the troubled mind. These pictures are not blurred. In short simple sentences with a minimum of technical language and in colorful detail supplied through case studies the author describes these unfortunates. The reader feels acquainted with them and may see himself so well reflected in these abnormal personalities that he may wonder with each chapter whether the author is not striking at him.

However, the book is reassuring to those who have normal minds, for the normal mind is not perfect. It records aches and pains and various symptoms just as an automobile in good condition has occasional squeaks. One principle to follow in gaining mental health is to live within one's biologic limitations. Many a breakdown is due to intemperate living. We all need to recognize the attainable and attempt only those things that are possible of achievement. Religion, philosophy and humor help one to meet the problems of life with fortitude. It is possible for one to avoid overwork, overstimulation and nervous fatigue and escape situations that invite extreme stress and strain. Peace of mind is not like manna which falls from the heavens; it has to be won.

Teachers and parents with some psychologic background might well profit from the reading of this book. Chapters like "Infantilism" and "Enuresis" should be illuminating.

J. Mace Andress.

Introduction to Motherhood

By Edwin F. Patton, M.D. Cloth. Price, $1.50. Pp. 137. South Pasadena, Calif.: Commercial Textbook Co., Ltd., 1938.

THE chapters in this book include the physical foundation for motherhood, preparation for the mating process, a chapter on mating and reproduction and a final chapter on the child. The information, for the most part, is sound and sensible. The chapter on the child is well written and gives just the type of information that the young mother will appreciate. How much the adolescent will get from this chapter, since it deals with a subject that is not strictly sex information, cannot be foretold. The teen-age boy or girl will have no more than an academic interest in the troubles that some babies have when teething.

While the author has attempted to stay clear of producing fear in the minds of his readers, especially when discussing the problem of venereal diseases, it seems that just the opposite effect has been brought about. He properly evaluates the possibility of contracting venereal diseases from external sources, but fear is still introduced by the constant repetition that "misplaced love is responsible for most of the cases among women."

Paul A. Teschner, M.D.

PUBLISHERS' ADDRESSES

The following list contains the addresses of publishers whose books are reviewed in this section:

The Macmillan Company, 60 Fifth Ave., New York City.
Emerson Books, Inc., 251 West 19th St., New York City.
Alfred A. Knopf, 501 Madison Ave., New York City.
Oxford University Press, 114 Fifth Ave., New York City.
P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.
Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore.
Commercial Textbook Co., Ltd., 1032 Mission St., South Pasadena, Calif.

PROTECTING the HEALTH of the CHILD

(Continued from page 432)

he either becomes shy or tries to take advantage of the limelight because he likes it. Instead of refusing the child participation in all activities because he has been ill, it is well to find something for him to do. He can help keep score, check names and materials or be time keeper. There are games and dances which all the children can play without endangering the mild cardiac cases. Keeping the child busy helps him to make the transition from convalescence to normality without too much difficulty and lessens the danger of his becoming an emotional problem.

The teacher should be constantly watchful to discover any unusual conditions which could be corrected or which might affect the pupils' academic work. Defective vision, for example, may impair the quality of work done and at the same time put a strain on the eyes which may result in permanent injury. In the routine of classwork visual defects are often overlooked. The teacher is not expected to master the intricacies of complicated eye examinations, but by the use of cards and observation she may discover marked cases of visual defects. If the child has frequent headaches, sties or itching eyes, visual difficulty may be suspected. In "Conserving the Sight of School Children," the National Society for the Prevention of Blindness publishes a report from the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, in which the following symptoms of defective vision are included:

1. Attempts to brush away blur.
2. Blinks continually when reading.
3. Has fits of temper.
4. Holds book far away from the face when reading.
5. Holds the book too close to eyes when reading.
6. Holds body tense when looking at distant object.
7. Is inattentive during reading lesson.
8. Is inattentive during wall-chart, map or blackboard lesson.
9. Is inattentive during class discussion of field trip or visit to museum.
10. Is irritable over his work.
11. Reads but brief period without stopping.
12. Rubs eyes frequently.
13. Screws up face when reading.
14. Shuts or covers one eye when reading.
15. Tilts head to one side when reading.

Defects of the ears, too, should be noticed. Frequently a pupil is considered dull when he simply does not hear well. The child with good hearing should be able to distinguish a whisper at a distance of 20 feet. When a pupil presents creditable written lessons but poor oral work the teacher should check defective hearing as a possible cause.

One of the most serious problems with which the school has to deal is that of the common cold. In a study made of the attendance of the school children it was reported as the cause of 56 per cent of all absences. An alarming number of other disabilities were traced to the same source. If every child suffering from a cold could be kept at home during the coughing and sneezing stage, the control of other contagious diseases would be much easier. Most contagious diseases have the same symptoms as the cold and are all too frequently dismissed as such. Every teacher who can help to decrease the incidence and severity of the "common cold" will have made a valuable contribution to the health of the school and community.

The parents present one of the most serious aspects of this problem. The teacher must accept the responsibility for attempting to educate them to the seriousness of colds and the danger of the after-effects. Every possible approach should be used for securing the sympathy and cooperation of both parents and children in an effort to control this formidable enemy of health.

In her zeal to accomplish a great deal and to encourage the pupils to unusual achievements it is easy for the teacher to forget the strain which may result from such high tension. Many children are irritable and more susceptible to colds and other communicable diseases because of fatigue due to overstrain in school. Realizing the value of relaxation the teacher should try to keep the children busy and happy without urging them to increase their efforts beyond their capacity. The schedule should be made out to provide time for changing classes and getting dressed for the physical education period without rushing at full speed all day. Free play periods should be included as a part of every day's schedule and should not be used for other purposes even though the need may seem urgent. If pupils are expected to participate in programs or demonstrations, time must be provided so as not to overtax their strength and nervous energy. It is seldom permissible to keep a child after school for any purpose.

As difficult as it may be to remain constantly watchful that the physical welfare of the child be safeguarded, the teacher is obligated to do so. Lessons missed today may be learned some other time; a record less than perfect will be forgotten in years to come; but impaired organic vigor is not always recovered. Every teacher should seek health for her pupils as their greatest asset, remembering with Ben Jonson that "it cannot be bought at too dear a price because there is no enjoying the world without it."

[NOTE.—Next month Elizabeth Cotton will consider the parent's responsibility in "Protecting the Health of the Child."]

BOYS AND GIRLS WEEK

"Boys and Girls Week may be likened to a power line which distributes *energy* for developing these 'resources' and *light* on how it may be done." Thus the annual observance of a week devoted to furthering the interests of children and their recognition as a great potential resource gets under way Saturday April 29.

Child Health Day is Monday, May 1. According to the program planned for that day, "the importance of a sound body should be accentuated by means of health campaigns, poster exhibitions, lectures, etc., stressing that a requisite of success is physical fitness."

PARENTS, INCORPORATED

(*Continued from page 399*)

counted in this relationship of parental attitude and child adjustment may be of interest. These are the parents' good health; their care in the upkeep and furnishings of the home; knowledge of the child's schoolmates and interest in his games at school; willingness to let the child go away from home with other children; granting of freedom in recreation and in use of spending money; attention to religious upbringing; reasonable watchfulness over the child's health, and attendance at entertainments. Parental attitudes do shape the personality of a child; whereas material surroundings are not of vital importance.

The unhappy, nervous youngsters in the house by the mill did not inherit all the poverty of their bodies and brains. Half a dozen neglected years in a dirty, crowded little shanty, under insanitary conditions and with inadequate food gave them their sick, undernourished bodies. And half a dozen years of eternal scolding and alternate affection and punishment left them afraid to speak above a whisper. There is nothing in their own yard, or in the yards of their playmates, to challenge their small brains to higher levels of comprehension.

It might have been a different story for them had they been lifted into a pleasant, stimulating environment, which offered patience, security and steady affection. Heritage is not simply a matter of innate characteristics latent within two microscopic embryonic cells. Heritage is, pretty largely, a great overwhelming mass of attitudes and habits passed directly from parent to child during the uncertain business of day-to-day living.

Half a block from the underprivileged children by the mill lives a girl near the lead in her class at school. Hers, too, is a poor home. Her unpretentious origin shows clearly in her lack of social aptness and in her slight air of diffidence among her schoolmates. But she is learning. By the time she finishes high school she will have overcome, to a large degree, the sinister influence of the poverty-stricken mill district. Her parents are of different caliber.

But it is scarcely probable that the other two children will ever see high school. Even if they manage to live until they reach the proper age, their brains will long since have become hopelessly enfeebled.

It is, then, only too true that the home is frequently an unhealthy environment for both parents and children. Each one—man, woman and their child—is tied to each of the others with an inevitability that may easily aggravate any incipient tension or irritation. Over a period of years (sometimes decades) these minor irritations grow to tremendous proportions and do irreparable damage to the personalities and happiness of husbands, wives and children. The tragedy is that the vicious thread never breaks off. Through the children, grown to men and women, the next generation pays, unhappily, for the maladjustments of their parents.

The home can be something far from the haven it represents. A mother, thwarted in her youth from following a career, tries to make of her son a lawyer. Unaware of her insatiable hunger for the reflected glory thus attained, she credits her urgency on him to her affection and her desire that he shall be entirely successful. She cannot understand that he would be happy only as a mechanic and the husband of the girl across the street (to both of which she objects as unworthy of him). That he is stubborn and "disrespectful" she attributes to any reason but the true one. Probably she thinks he inherited his disposition from his father! Far better, say our critics, that the child grow up under the trained guidance of the nursery school they advocate.

A man and a woman so bungled their early married years together that their only feeling was a cold endurance of each other's presence. Yet they elected to keep their home unbroken for the welfare of their children. One of their daughters said afterwards that until she was 10 years old she thought that to be married was to be unhappy. Far better had she been outside the home that was kept unbroken for her sake. It speaks little for the sanctity of the home if this were all that it could show of what it does.

Unhappiness in the home, yes. But that is far from being the whole story. Marriage and the home have grown, or evolved, out of one of the most powerful instincts men and women know. For thousands of years it has slowly changed. By degrees the father came to assume some of the responsibilities for the care of the young. Eventually something other than mere sexual satisfaction was achieved in this relationship of two, a man and a woman, plus their offspring. It became necessary to do certain things together to survive. The home was the fundamental unit in the social organization and in the economic system.

The need for all these extra functions of the home has pretty largely passed. But it has still the function of caring for the child. That this care can be of a high order the scientist has proved. These scientific findings, so carefully assembled, have become not a condemnation of the home as a unit, but a commentary on the efficacy of the family quality to be found within it. Like all other social and human institutions, the minimum and the maximum are at the two poles, and somewhere between fall all the rest of the cases—neither entirely good nor entirely bad. It is a matter of degree. The deficiencies of the home rest on the individuals who make it up.

Whether another organization could more successfully assume these responsibilities for the nurture of the child has not yet been determined. Possibly one could be so established. But the fact is that none has as yet appeared which has proved its efficiency in doing so. Most of the proposed institutions are still largely theoretic. It is true that care along the lines proposed should obviate many of the tragedies of individual children in the home. It is also true that we do not know whether children reared under such circumstances would escape maladjustments to as great a degree as is anticipated. What would be the effect of this standardized "maximum" environment superimposed on the young lives of a whole generation?

And although the individuals in charge would be trained for their work, the fundamental instincts of man remain the same. Men and women would still be drawn together into a relationship analo-

gous to marriage. What would be the effect of the removal of the individual responsibilities for children and of the projection of self into one's own small contribution to future generations? Could the child, separated so from the man and woman who are his parents, escape altogether the myriad maladjustments which accumulate where men and women meet to form a society? It is still far from certain that group responsibility, instead of that of the individual, would create the race of normal, happy adults its advocates so earnestly contend.

It would seem that the answer lies in another direction. Science has shown the good effects of the maximum home. There should be more strenuous efforts in the direction of this attainable maximum. It is only too true that children like those by the mill are the victims of their environments in a social sense. What society can do is to furnish expert assistance for homes such as these. Marriage clinics, psychiatric service, child welfare counsel, educational preparation for marriage—assistance of this nature can make of the home a much finer, much more desirable institution than it now is. Adequate nutrition, physical care and playgrounds we are beginning to recognize as fundamental. It is just as essential, when tension and unhappiness germinate between husband and wife, between parent and child, that society furnish them the expert assistance they need. Under present circumstances such facilities are available for only a small percentage of our population. A beginning is being made in the establishment of psychology clinics in connection with juvenile courts. But it is a waste both economic and human that individuals should reach a state of delinquency before aid is given. When society recognizes its responsibility to the shy, asocial child, to the uninterested, dull boy or girl, it will place such service at the disposal of the public as it now makes education available for every child. There will be a whole large profession of men and women whose business it is to see that the lives of the individual man, woman and their child run as clearly and smoothly as possible.

Such a program retains for the child the affection and security of the home into which he was born. It gives him an individual sense of his own peculiar place in the society of his generation. It preserves for him, so far as it is humanly possible, the beautiful part of the relations of men and women and goes far in removing causes of emotional tensions that warp the happiness out of individual living.

The man and the woman, plus a child. It can perhaps be a happy thing that each should project his own ego through the child. If there is engendered with this a fundamental respect for the child as an individual, there can be a fine sense of cultural continuity passed from father and mother to son and daughter. When this continuity becomes entangled with misdirected passions and maladjustments, society can render no greater service both to individual and group than to make available such mental and moral assistance as will insure as great a measure of human integrity and happiness as is humanly possible.

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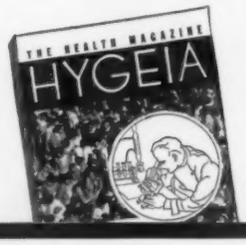


ART in MEDICINE

(Continued from page 410)

nurses and the other patients who share the ward together.

The art work being carried on through the project at Bellevue is also valuable because for the first time it brings under the observation of numerous physicians the drawings of children whose behavior and mental problems have been observed in a variety of ways and who were used at one time as subjects for special tests in art work by doctors holding divergent views.

Through the artist, physicians and health associations can present their message or problem more graphically, it is believed by authorities. Educating the public in matters of health is best effected through the process of visual teaching. In this method drama is the essential element. While valuable in many respects, the conventional types of mediums, such as graphs and statistical charts, do not measure up to the results obtainable by forceful dramatization of health problems by a competent artist. It was found that the best type of display for this purpose is the three-dimensional stage models constructed by the WPA Federal Art project and shown with WPA health posters and WPA hospital murals during a recent American Public Health Association convention.

This WPA Federal Art project display comprises the three model stages designed and executed by the scenic model division. Dramatizing present day poverty stricken tenement houses, they show the conditions under which diseases breed and demonstrate the horror of disease epidemics in a scene from the thirteenth century Black Plague epidemic in London.

Posters have been designed as well for the Department of Correction's campaign of enlightenment on social diseases, and "better housing" posters have conveyed the message of slum clearance and low-cost housing developments, a vital part of the program of the New York City Housing Authority. The New York City Department of Health has just commissioned the poster division to design posters on the theme "Fight Disease with Cleanliness." These posters will be placed in stores where precautions against transmitting disease are used and will indicate that the storekeepers use these precautions.

R. I. Nesmith

"OH-H! WHAT'S THAT? WHY DOES IT SQUIRM SO? WHAT MAKES IT LOOK LIKE THAT?" SUCH IS THE NATURAL INQUISITIVENESS OF CHILDREN BEFORE THEIR CURIOSITY IS DISCOURAGED BY CONVENTIONAL TEACHING SYSTEMS.

SCHOOL and HEALTH

KEEPING THE CURIOSITY OF CHILDREN ALIVE

Conducted by J. MACE ANDRESS, Ph.D.

NOBODY doubts the reality of a child's curiosity. He is a living question mark. From the time he opens his eyes in the morning until he closes them at night he discharges questions with the prodigality of a Gatling gun. These questions are often the bane of parents' lives. Some of them they can and do answer, but many of them challenge their knowledge and ingenuity. Often they are forced to give up in despair; yet this craving for knowledge is one of the most valuable of the child's tendencies. It is genuine. He really wants to know for the knowledge itself—not to get a higher mark, gain promotion or win some one's favor.

One of the first questions children ask is "What is that?" For a time the simple statement of names suffices, such as "bird, bug, horse, knife, dog." This sort of question is easily answered, and under the influence of this stimulus the child's vocabulary increases rapidly. A second question has to do with "How?" There are queries such as, "How does a fly climb up on the wall? How does a watch keep time? How do snakes live in the winter?" A third type of question is the most difficult of all. "Why is the sky blue? Why do cats purr? Why do I breathe? Why do I have to go to school?" Even the best informed parent under the fire of what, how and why may well develop humility.

After questions are answered, children are not content. They are natural investigators. The cat's tail is pinched to find out what she will do. A watch is taken apart to find the tick. Trees are climbed to peer into birds' nests and find eggs and little birds.

The state of the child's mind which impels him to learn about things by questions and investigation is normal and healthy, even if at times he may seem to parents to be obsessed. It shows that the child is naturally a scientist. Like the scientist he is always asking questions and is forever experimenting and thinking to broaden his horizon.

When the child enters school, he should be easy to teach. He is alive. He wants to learn. It should be easy and fascinating to guide children so that they will read and observe things to find answers to their questions.

In a conventional school those eager boys and girls soon seem to become bored by school work. They ask few questions and sit silently and somewhat helplessly in their seats. Gradually but surely a revolution takes place. Eventually the teacher, instead of the child asks the questions. Curiosity seems to be crushed. The attitude of the children might be well expressed in the "Cheerful Cherub" syndicated newspaper articles:

"I long to know a lot of things,
With curiosity I'm cursed;
But teacher tells me that I must
Complete my education first."

As children journey along through the grades of the public school their curiosity seems to fade away gradually, until in the latter part of the senior high school and in the freshman year at college, curiosity as such has all but disappeared. Keen intellectual appetite has become dulled. What a waste of psychologic resources! What an atrophy of powers! What a difference between the usually indifferent high school and college students and the live investigating, questioning boys and girls of preschool years! What can we do to preserve this original spirit of inquiry known as curiosity?

Progressive educators have found that there are two or three policies worth considering.

First of all, children may be encouraged to ask questions. This is too seldom done. Teachers complain that so much time is wasted by considering questions that the requirements of the course of study cannot be satisfied. Doubtless this is true. So long as ground to be covered, rather than the welfare of the pupils, is considered of first importance this condition will continue. Perhaps what happens in many a classroom may be illustrated through the following incident. The sixth grade class in geography was studying about Brazil. Coffee was mentioned as one

of its chief products. A boy in the back row of seats held up his hand and asked eagerly, "I wonder how people ever came to drink coffee, anyway?" The teacher, who was obviously annoyed by the question, said: "That will do. We haven't time to answer that question today." The boy sank back in his seat, all his enthusiasm gone. After a few such experiences it is fair to assume that he learned his place. He would not care to ask any more questions.

Our best teachers today encourage their pupils to ask questions. Boys and girls learn that it is just as satisfying to ask intelligent questions as to answer those proposed by the teacher. If questions cannot be answered on the spot, there is an incentive to look up facts bearing on the problem. In some schools or classes teachers of hygiene have found it helpful to have a question box in which slips can be deposited. Often pupils are not required to sign their names. Some teachers make a survey of their classes to find out what their pupils are curious about. This often leads them to reshape their teaching plans.

Questions naturally invite investigations and experiments. The thrill and satisfaction in working for an answer to questions in these ways lend themselves to a scientific mood and inspire other questions for which children crave an answer or explanation.

John Dewey has suggested that the important outcome of a period of education is not so much the actual facts gained but the state of mind of the pupil. The inquiring mind is usually left with some measure of dissatisfaction, so there is a motive to push on over the horizon to discover new lands! Good teaching means opening doors and keeping them open!

Missouri's Dental Health Program

By THELMA SUGGETT

The state of Missouri found as other states have found that about 90 per cent of its school children had defective teeth. Miss Suggett, Supervisor of Health Education, Missouri State Health Department, tells us about the effective program of prevention and correction initiated in that state.

MORE than 90 per cent of the school children in Missouri have defective teeth. And so, it was decided to put a stop to surveys and start directing all efforts toward the improvement of the oral condition of school children.

A constructive program of prevention and correction through education was outlined. As the work progresses, surveys will again be made as a means of evaluating the results obtained.

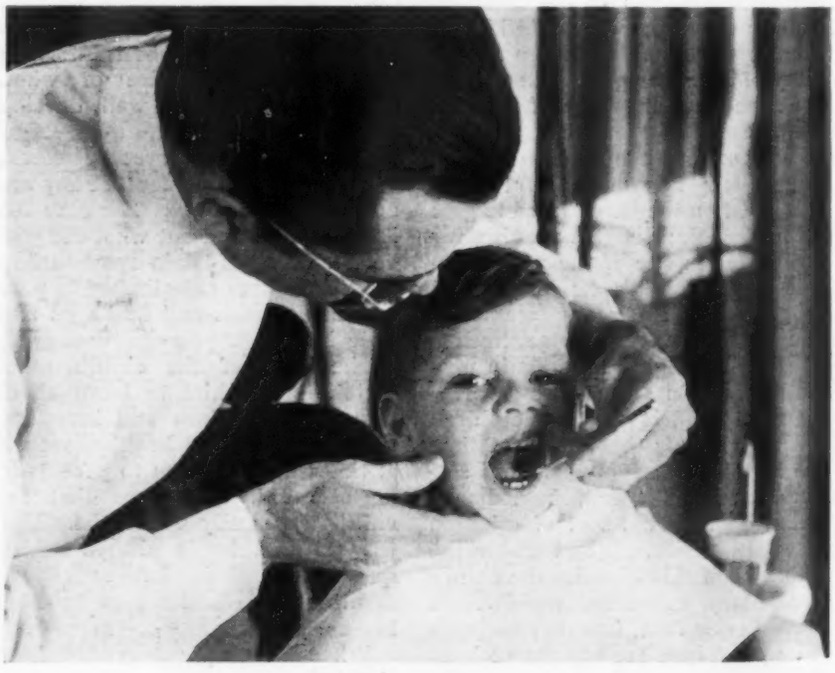
The Missouri Dental Association serves in an advisory capacity to the state dental division, and the program must develop with the counsel and approval of organized dentistry. Missouri's program depends on practicing dentists, as it does not include any operative dentistry by the department personnel.

In order to stimulate interest in public health and children's dentistry among the dentists, clinical conferences or "refresher courses" were conducted in seven sections of the state, reaching practicing dentists in virtually every town and village. A specialist in children's dentistry was employed to conduct these courses. This plan of education within the profession is being continued through public health discussions in district dental society meetings and lectures on public health dentistry in the dental colleges.

Inasmuch as dental health actually has its beginning before birth, the program should begin with the expectant mother. The dental division sees that appropriate literature reaches the expectant mothers through public health nurses, baby clinics and other sources. Similarly, emphasis is given to dental health of the preschool child through parent-teacher associations, particularly because permanent teeth begin to erupt about the sixth year, and proper dental care is then essential.

Rather than attempt to spread the dental health program thinly through all school grades, the Missouri division is concentrating its efforts on children in the lower grades. Most effective work can be done with first, second and third grade children. Health habits can be taught more effectively to young children, and they present a minimum of serious dental defects.

A definite plan was formulated for making this program work in the schools. School superinten-



THIS PROGRAM ENCOURAGES THE HABIT OF SEEKING ADEQUATE DENTAL CARE ON THE CHILD'S OWN RESPONSIBILITY.

dents were contacted, the project explained and arrangements made for a dentist from the state health department to visit the school and inaugurate the program. Dentists of the community were interviewed personally or collectively and consulted about the most effective way dental examinations could be made in their community. Most dentists preferred to make examinations in their own offices.

When he arrives at the school the dentist from the state department performs certain definite services.

1. He makes health talks and shows educational films to the pupils.

2. He supplies teachers with suitable educational material for teaching dental health.

3. He meets with parents and discusses with them pertinent phases of dental health with which they need to be familiar, as the importance of adequate nutrition, of the care of six year molars and the deciduous teeth, of mouth cleanliness, periodic dental examinations and early correction.

4. He supplies local dentists with examination blanks furnished by the state health department. He leaves with some responsible person in the school a summary card, on which total examinations made, defects discovered and corrections made are to be recorded and sent to the state health department for statistical purposes. This information is compiled from the examination forms, which were left with the dentists. The original cards remain in the school as permanent records.

Whenever possible, children are sent to their family dentist for examinations. "It has already been shown," says the director of this movement, "that by making this a definite schoolroom project, most children will visit their family dentist." Dental examinations can be made in the school for those children who have not been examined after a certain length of time. The Missouri program aims at getting young children in the habit of seeking adequate dental care in the dentist's office, as they will need to do later. No awards are employed in this program.

Notices are sent to parents from the school urging that all necessary corrections be made by the family dentist. An attempt is made to have local dentists, the Parent-Teacher Associations and other civic clubs cooperate in working out some plan for taking care of the dental needs of indigent children. Local dentists are not asked to give any free service except the examinations. It is felt that children should be trained when they are young to budget for necessary professional services.

While it may not always be practical to carry out this program in all details in each community visited, the plan has been generally employed in all sections of the state with satisfying results.

Teaching Hygiene to High School Boys

By CHARLES J. SCHNEIDER

Charles J. Schneider, the chairman of health and physical education in the Weequahic High School, Newark, N. J., tells us briefly about the general program for health teaching in his school and more in detail about the work of the third year, which centers around "The Problems of Personal Adjustment and Growth." These mental health studies are becoming increasingly popular in our high schools.

THE teaching of health is a recent addition to our curriculum. We have a tentatively graded program with which we have been given a free hand. The tentative curriculum recommends that we present "Individual Health" and "Nutrition" to freshman pupils; "Group Health" and "First Aid" to sophomore pupils; "Problems of Personal Adjustment and Growth" to third year pupils, and "Safety and Public Health" to boys in the fourth year.

The material in the first, second and fourth years has been comparatively simple to organize, prepare and present; but we ran into a snag in getting sufficient material to make our third year course practical and interesting. We are still molding the course.

The "Problems of Personal Adjustment and Growth" is extremely difficult. It involves not only a basis of simple information on psychology, a fair foundation of the known facts of glands and acquaintance with the process of growth and the problems of the "adolescent" but also the tremendously big field of emotions and behavior. We were trying to give too many varieties of information.

Because we have been advised by the city fathers not to initiate the problem of sex education, our problem has been made a little more simple in one way and yet more difficult when faced with a specific question on sex in class.

What we do with this group today has met with enthusiasm both in students and the men of the department who teach this phase of work. We first outline the many problems that come under the heading of "Personal Adjustment and Growth," and we ask the boys to choose those phases of personal adjustment and growth which are of greatest interest to them. We then treat those problems in the order of choice, so that those things of keenest interest to them are presented first. If there is time, we attempt to cover more phases of their interest.

Our second step is to ask each boy to write an autobiography, in which we ask him to tell of his plans for the future. We ask him about his family. The occupation of his father, mother, sisters and brothers. We ask the boy to tell us about his hobbies, his ambitions. We try to get as much from the boy about himself as he will say. This gives the teacher a rich background for personal treatment and with it a regard for personal differences.

In addition we like the magazine HYGEIA and recommend it as outside reading. The boys find a lot of articles pertaining to the problems under discussion, both in back numbers of this magazine as well as in the current issue. There are always articles pertaining to adolescence, growth, personality or some form of personal adjustment problem in each issue of HYGEIA. This magazine and others which carry articles pertaining to health and personal adjustment are always welcome as individual reports in class. In addition, we assign the daily newspaper as a medium for much of our outside reading material.

Another form of activity is visitation outside of school. The procedure here is to have members

of the class visit with personnel managers of department stores and industries. The boys usually get a series of questions from the members of the class pertaining to information the class might use. On one such visit, the boy apparently made such a good impression on the man whom he interviewed in one of the big department stores that he was offered a job after he graduated.

Food Experiments for the Classroom: IX

By ETHEL AUSTIN MARTIN

Mrs. Martin, Director of Nutrition Service of the National Dairy Council, gives some unusual and interesting information about our most popular vegetable, the potato. These experiments offer an excellent outlet for the curiosity of pupils.

THE potato habit has become so fixed with Americans that many people think that dinner isn't dinner unless it includes potatoes. But potatoes were not always so popular in this country. Not until years after they were first brought to America in 1719 did they become a common article of diet. Potatoes were brought here first by Irish Presbyterians, and it has been suggested that this may be the reason why white potatoes are often called "Irish" potatoes. Despite the fact that the white potato was introduced into North America from Europe, it is believed to be native to America, having been found first in Chile.

In 1935 the United States produced more than 386 million bushels of potatoes. While that sounds like a great many potatoes, it fell below the amount grown by France, Germany and Poland who produced 526, 1,518 and 1,194 million bushels respectively. According to available figures, about one half of all the farms in our country produced some potatoes in 1934. About one fourth of this amount was used on the farm for food or seed. Maine led all the states producing potatoes in 1934, fourteen out of every hundred bushels having grown there.

The potato is an important food. The fact that it has a pleasant, bland taste makes it a natural accompaniment of other foods in daily meals. Likewise the fact that it is relatively high in calory value and is moderate in cost makes it an economical source of energy. Following is the percentage composition of white potatoes:

Protein	2-2.5%
Carbohydrate (mostly starch)	18-20%
Ash	About 1%
Water	75-79%
Fat	Almost none

It will be seen from these figures that potatoes are not a rich source of protein; nevertheless when they make up a large proportion of the diet, as is true with some people, potatoes yield a considerable proportion of the total amount of protein taken. To a large extent, the same is true of the mineral (ash) content of potatoes, especially with respect to iron. An added factor in obtaining iron from potatoes is care in the way they are peeled. If potatoes are cooked in their "jackets" and the skins removed without disturbing the flesh of the potatoes, much of the iron content is saved, which might be lost with the ordinary peeling method.

Potatoes furnish some vitamin C. The larger the proportion of potatoes in a diet and the poorer the diet is in other vegetables and in fresh fruits, the more can potatoes be depended on for their vitamin C content. The diet of Irish peasants has been cited as a case in point. Potatoes make up a large part of the peasant food supply. When the potato crop fails, almost invariably there is an outbreak of scurvy, which results from a lack of vitamin C in the diet.

Probably the most surprising fact revealed by the composition figures is the amount of water contained in potatoes. Actually, one large potato will contain almost a cupful of water. It is hard to realize that so much water is present because it is held in the cells; but when the cell walls are broken, as in grating a raw potato, a surprising amount of water is squeezed out. Potatoes contain about the same proportion of water as oranges.

Starch is the nutrient which occurs in potato in the largest amount. Also starch yields by far the greatest proportion of the total calories, which are furnished by potatoes. The starch in potatoes can be studied in several ways, for example, (1) by examining it under a microscope as it exists in the cells of a thin slice of raw potato or (2) by noting the texture when it is washed out of grated raw potato. In both cases the blue test with iodine establishes the fact that it is starch.

Application to the School

If microscopes are available to upper grade students they can examine potato starch as is suggested under number 1. At all ages, however, children will enjoy identifying the starch as described in method number 2. The latter test involves "taking a potato apart," and the method of doing so is described in the first experiment which follows.

Experiment with Potatoes: I

Problem

To take a potato apart

Materials

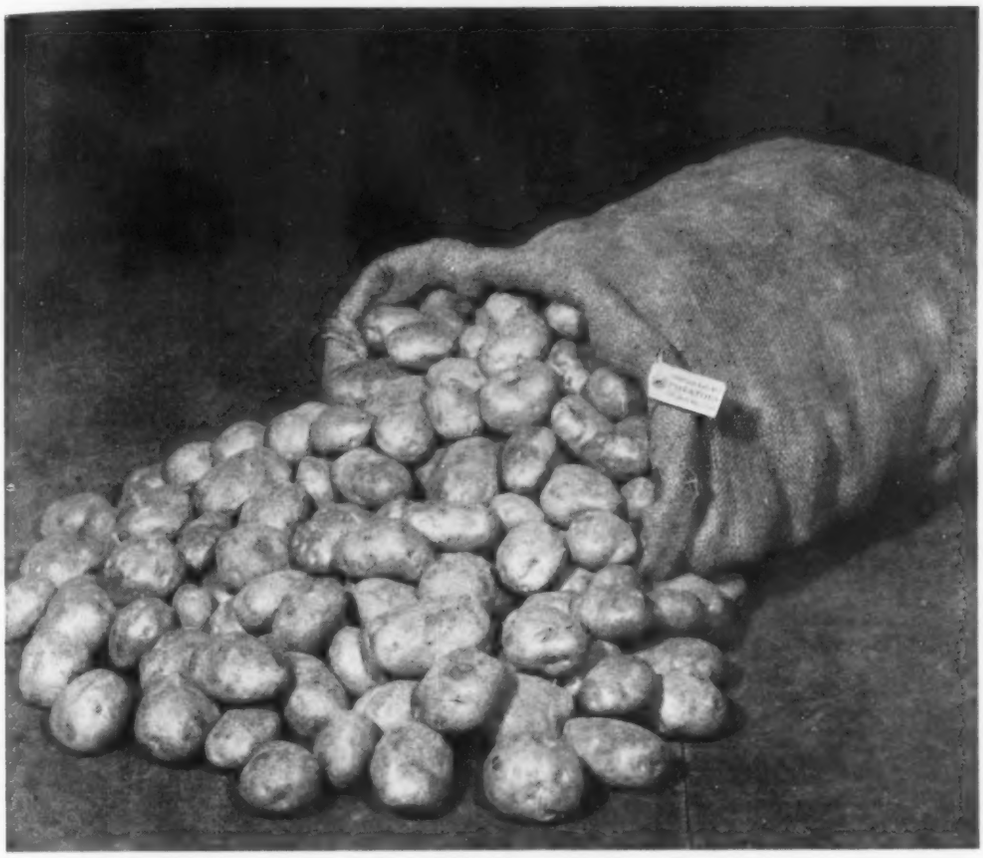
Raw white potato
Tincture of iodine
Grater
Cheese cloth
Bowl of water
Test tubes
Dropper

Fifteenth Experiment

Grate the potato into a piece of cheese cloth. Gather up the ends of the cloth, and tie them so that the grated potato is held in a loose ball. Squeeze out all the liquid possible. This liquid is water. Then dip the ball in the bowl of water. Squeeze, and knead it in the water for about five minutes. Then let the water stand for an hour or more. (Save the grated potato in the bag for the next experiment.) A white substance will settle out of the water and collect at the bottom of the bowl. Pour off the water carefully. Feel of the white substance, and test it for starch. (See second experiment.) This is raw starch and shows the characteristic blue color when iodine is added to it.

Results

When grated potato is squeezed tightly in a cheese cloth bag, drops of water come through the bag, indicating that potatoes contain water. When the bag of potato is washed thoroughly a white substance in the potato is washed out into the water. The iodine test shows that this material is starch.



DESPITE THE FACT THAT THE WHITE POTATO WAS INTRODUCED INTO NORTH AMERICA FROM EUROPE, IT IS BELIEVED TO BE A NATIVE FOOD, HAVING BEEN FOUND FIRST IN CHILE.

Conclusion

A simple way to take a potato apart is to press out some of the water and to wash the starch out of the remaining portion.

Application to Upper Grades

It is suggested that only older children continue the tests on potatoes by performing the sixteenth experiment. The results are for the most part negative or only mildly positive in this experiment and will not therefore be interesting to children in the lower grades.

Experiment with Potatoes: II

Problem

To find what is left in the potato after washing out the starch.

Materials

Washed grated potato	Ammonium hydroxide
Fehling's solution (Parts I and II)	Bunsen burner or other flame
Tincture of iodine	Asbestos sheeting
Nitric acid	Dissecting needle or forceps

Sixteenth Experiment

1. Test washed grated potato for sugar (see first experiment).
2. Test washed grated potato for starch (see second experiment).
3. Test washed grated potato for fat (see third experiment).
4. Test washed grated potato for protein (see fifth and sixth experiment).
5. Test washed grated potato for ash (see seventh experiment).
6. Test washed grated potato for water (see ninth experiment).

Results

1. No reddish color appeared when Fehling's solution was added, showing that white potato has no sugar. In a sprouting potato some of the starch has changed to sugar, and in such a case the reddish color might show up in the starch solution tested in the previous experiment.
2. A blue color appeared when iodine was added, showing that washed grated potato still has some starch. The more thoroughly the potato has been washed the less starch is present and the fainter the blue color.
3. No grease spot appeared when the grated potato was rubbed on notebook paper showing that potato contains little or no fat.
4. The faint odor of burned feathers when the grated potato was burned and the slight orange color which appeared with the nitric acid and ammonium hydroxide test showed that potato contains a small amount of protein.
5. The ash which remained when some of the potato was burned showed that potato contains mineral matter.
6. The dried appearance (or the lessened weight) of the potato on exposure to air for several hours showed that it still had contained some water after the grating and washing process.

Conclusion

The foodstuffs present in washed grated potato can be determined by simple tests for sugar, starch, protein, ash and water. This portion of the potato contains some starch and protein, ash and water. It contains no sugar or fat.

The findings from the two experiments on potatoes should now be assembled and conclusions drawn as to the food value of the entire potato. The positive tests reveal the dietary constituents, which are present in the different parts of the potato. This does not apply to vitamin content, however, since tests for vitamins are not included here. Tests which are negative indicate which dietary essentials are lacking in potatoes.

Little Journeys Among High Schools: IX

By JEAN V. LATIMER

Again we take another tour with Miss Latimer into the classrooms of Massachusetts. She finds that much of the work in health is decidedly practical. Home nursing and child care are receiving increasing attention. Almost every classroom teacher will find suggestions in this article which she can use in her work. Miss Latimer is Coordinator of Health Education, Massachusetts Department of Public Health. Her field work leads her to observe a great variety of health education.

HOME nursing and child care is another important and practical aspect of the health education curriculum which is at present receiving more attention. In my visits to high schools I find an increasingly large number beginning such units of activity in the ninth year.

The teaching is done, as a rule, in the rooms assigned to the home economics department and is a joint cooperative teaching project between the public health nurse and the home economics teacher.

Formerly, as in first aid, home nursing and child care was considered a club activity; but now such work is being recognized as a regular phase of health teaching. The average time being given is two periods a week for a half of the school year. In some high schools the time is extended to meet the standard requirements for the Red Cross Home Nursing and Child Care certificate. One high school principal said the objectives of such a course were:

1. To gain additional appreciation for the necessity for teamwork in the family.

2. To arouse appreciation toward the home care of the sick.

3. To learn through reading, discussion and demonstration some of the skills which make a patient more comfortable in bed.

4. To appreciate the need for medical care, professional nursing service and hospital care for sick patients.

It is evident that the emphasis is being placed not on deferred values and needs but on units concerned with the personal activities of the junior high school girl herself. In one school I observed a unit being developed on this theme: "What should a junior high school girl be able to do in order to be helpful when there is sickness or an accident in the home?"

In this class I observed the girls tabulating the important things to consider in the selection of a temporary sick room and the items concerned in making a sick room more attractive. The teacher asked this question: "If you were ill in bed for a few days, what kind of a room would you like best?"

Sarah thought cleanliness was the most important item; while Virginia said she thought simplicity was equally desirable. She said, "If I were nursing a patient in a room all cluttered up with unnecessary things, I would immediately throw out some of the junk, for mental rest for the patient has to be considered just as well as physical rest."

Another girl said, "We want to have restful colors in the sick room too, such as green and blue." This class also drew a floor plan of a room and showed what changes they would desire if it were to be used as a sick room.

Another day I observed the public health nurse having the girls of this class demonstrate the proper technics for making a bed with a patient in it and also for bathing a patient in bed.

Preparing and serving special foods for a sick person is a practical use of the knowledge and skills which the girls in the home training department have acquired in their cooking classes. In one of the best taught classes in the state, each girl is required to prepare and serve a tray for a sick person. Each member of the class is also expected to have some skill in preparing several different menus.

Technics are being increasingly stressed—especially if the class is qualifying for the Red Cross certificate.

Teaching home nursing and child care is also an opportunity for some vocational guidance. For example, there is one public health nurse who has a discussion each year in her class on nursing qualifications and the courses in high school which best prepare a girl to meet the entrance requirements for standard hospital training.

In another high school I found a unit being developed on: "What a junior high school pupil should know about signs of sickness and meeting household emergencies." They were investigating such problems as these:

1. Review briefly with the class the causes of illness. Faulty working of the body organs, infections and infectious diseases, accidents and mental conflict.

2. Review also four important procedures for keeping well.

3. Can you tell anything about a person's health by his general appearance? Do you know some of the signs of health? List these with the class. Is illness expressed in one's appearance and behavior? How?

4. What is meant by the word "symptom"? Why should everybody be able to recognize the general signs of illness? When should the doctor be called?

5. Consult reference books for list of the most important symptoms. What is meant by objective symptoms? Subjective symptoms?

In another instance, after the class had discussed the dangers of self medication and the use of "patent medicines," they consulted references to find out what medicines should always be included in the home medicine cabinet.

Each girl consulted with her mother and planned a medicine cabinet for her family, and a report was made in class. Stress was given to the special attention necessary in the care of poisons, drugs and the disposal of unused medicines.

Since many high schools do not have special first aid classes for girls, the home nursing class often includes a good many of the simple first aid demonstrations. I have observed classes of girls learning to put on bandages of various types and to give artificial respiration.

In discussing such problems as, "What should a junior high school girl understand about the control of communicable diseases in the home?" an opportunity is afforded for repeating from a different angle the information developed in the general health curriculum concerning community health. Such problems as immunization and isolation should be considered as a back-

ground for the care of communicable diseases in the home.

This class investigated what the local board of health was doing for the control of communicable diseases and made posters, which were used by the board in its educational program for eliminating diphtheria by immunizing preschool children.

In teaching the care of communicable diseases, demonstration plays an important part. In a rural school I found a public health nurse giving a demonstration to a class of girls on how to use an apron in caring for an isolated patient and how to remove linen from an isolated room. She was also demonstrating the simple methods of disinfecting.

Terminal disinfecting by the use of soap and water caused quite a discussion when one girl said that her mother still believed in the burning of sulfur candles rather than the use of soap and water.

Child care is an important part of such courses. In one country school I observed not only the public health nurse demonstrating the bathing of an infant, using a doll, but the girls themselves were actually "going through the performance." One of them was dreadfully afraid she could not hold the baby correctly—especially the back of his head; but after three trials, she succeeded.

In another class I had the privilege of looking through some attractive scrapbooks developed on the subject of proper clothing for an infant.

As a project, each girl observed a small child in her own family or in the neighborhood for twenty-four hours and wrote up her observations on blank records made out by the teacher. I looked through one of these record sheets and was impressed by the observations of the entire activities of the child she had studied.

Preparing a baby's formula and weighing the baby were other worthwhile activities of the unit.

In a large industrial city where such a course had been given for some years, the public health nurse said that they were now having the gratifying experience of having former high school girls, now married, come back for a visit and bring their babies with them.

Also there are many other evidences not only of the interest of girls in such courses but of their value in terms of actual "carry over" in life.

To Contributors:—*The editor of the School and Health Department will be pleased to receive articles dealing with the actual solution of concrete and practical health education problems in the school. Contributions on general theory are not solicited. Articles must not exceed 1,000 words in length and must be typewritten double spaced. Stamps should accompany manuscrips to insure their return if rejected. All articles accepted will be paid for at regular rates. Address Editor of School and Health Department of* HYGEIA, *67 Clyde Street, Newtonville, Mass.*

CONTACT LENSES

(Continued from page 394)

tact between the doctor who is fitting the lens and the manufacturer. During the fitting of a single patient, or indeed of a single eye, as many as a half dozen plaster casts may be made, and from each of these a half dozen new glasses may be molded before arriving at a perfect fit. It is reported that in the contact lens center in London as many as sixty-five glasses have been made in one day. The British specialists are convinced that with experience it may yet become possible to decrease the cost and to simplify the devices involved in fitting the glasses.

In the United States, there are already several firms which have been working in close cooperation with leading eye specialists in fitting contact lenses.

Contact lenses are establishing for themselves a place in the optical field. The exact area of that field still is in doubt, but most progressive oculists and optometrists agree that it is greater than the area yet occupied. Meanwhile, they are strongly affecting the design of eyeglasses and spectacles. To meet the cosmetic challenge of the contact lens, eyeglasses are now made in 300 shapes and a wide variety of tints, to conform more closely in color and contour with the wearer's face—which is all to the good. But possibly the principal profit most of us will reap from the newer contender is our increased pleasure in their use by actors and actresses.

Early rising and much bathing are profitable to keep a man in health, and they increase his riches and wisdom.—Plato.

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Devereux

TO AMERICA'S SCHOOLS

Your Health!

MATERNAL and CHILD HEALTH

THE radio programs for May take advantage of special dates on the calendar for the first three programs and an equally seasonal topic for the fourth. The titles are as follows:

May 3—Healthier Mothers. General advice for the expectant mother; good for girls and boys to know about.

May 10—The Doctor's Workshop. The place of the hospital in the health program of individual and community.

May 17—Healthier Babies. Daily routine of the healthy baby; medical supervision and feeding.

May 24—Toddlers, 1939. The preschool child and the health and personality problems of that age.

These subjects come appropriately in the month of May, coinciding with May Day or Child Health Day, as designated by Presidential proclamation, with National Hospital Day and with Mothers' Day. May Day is May 1st, Mothers' Day the second Sunday or May 14th, and National Hospital Day is May 12th. Interest in the preschool child is stimulated in the spring by the well known health project of the National Congress of Parents and Teachers, "The Summer Round-Up of the Children." The medical profession takes pleasure in dedicating this program to cooperation with these special interests in health during the month of May.

May 3: Great changes have occurred in the attitude of men and women and boys and girls toward motherhood. A few generations back the subject was surrounded with secrecy and mystery. Today it is recognized that boys and girls need to learn about fatherhood and motherhood. When they are in high school, the time may not be far distant when they will establish a home and become parents.

The essentials of healthy fatherhood and healthy motherhood are good heredity, good personal health and an intelligent understanding of what it takes to be a good parent. Much of this cannot be taught by the radio or in the schoolroom but must be learned in the home. Even there, it cannot be taught by formal lessons but must be absorbed from the everyday atmosphere, which surrounds the growing boys and girls.

The radio program entitled "Healthier Mothers" will show in dramatic form a few of the points relating to healthy motherhood and will also point out that the father is no longer the forgotten man.

May 10: Doctors and hospitals have always been closely related. Hospitals are necessary to the doctor for teaching students and to the students for learning medicine. They are necessary to the community and to the patient for the care of certain kinds of disease and the study of other kinds. They are the doctor's most important single accessory. At the same time, the hospital is an accessory. Patients are prone to visualize the hospital as a fine building, splendid equipment and smooth management. This is not a hospital; this is a hotel. The hospital must have adequate buildings and smooth management; it must be the finest type of hotel. But it must be more. How much more it can be depends on its professional personnel, its doctors and nurses. Without these the hospital would be merely a hotel for sick persons.

Popular demand has sometimes tempted hospitals to enter on the practice of medicine. When a patient goes to the hospital, he is not treated by the hospital, but by doctors. Hospitals cannot practice medicine. They can simply make it

Black Box

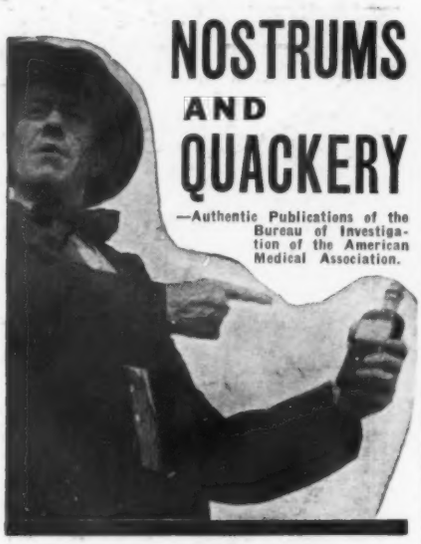
BOTH INFANT AND MATERNAL HEALTH HAVE GREATLY IMPROVED IN RECENT YEARS.

easier and more convenient for doctors to practice medicine and nurses to practice nursing. When the hospital organization and its professional staffs function together in smoothness and harmony, we have the best possible circumstances under which a patient can receive care and recover from his illness.

Because of high costs of modern medical improvements, hospitalization has grown more and more expensive, and ways have been devised to meet this expense on a group basis similar to the way in which life, fire and accident insurance risks are spread over groups of premium paying individuals. Some of these hospital payment plans are good, and some have undesirable features. The medical profession supports those which it believes to be good and opposes those which it believes to be bad; the basis of choice is what is best for the patient.

The program "The Doctor's Workshop" will set forth these points in dramatic form.

May 17: Almost twenty years ago, the principal subject of books about health was babies. During and immediately after the World War, deaths of babies occurred in an appallingly high figure each year. Infant welfare movements had been started in the latter years of the nineteenth century but were interrupted by the World War. Immediately after the war they sprang into full activity again, and great reductions were accomplished in infant death rates. Today infant mortality is much lower than it has ever been before. If it were not for the persistence of ignorance on the part of certain sections of our population, it would be lower still. Thirty and forty years ago infant deaths were due largely to the so-called "summer complaint," which came from



The Truth About Some

"CURES"

1. Patent Medicines

A reprint of articles by Dr. Arthur J. Cramp, discussing the general relation of the "patent medicine" evil to the public health. Illustrated. 15 cents.

2. Cancer "Cures"—"Treatments"

Deals with a miscellaneous assortment of "cures" and "treatments" for cancer. Illustrated. 15 cents.

3. Obesity "Cures"

Describes some of the systems sold on the mail order plan, as well as a number of preparations purchasable at the drug stores. Illustrated. 15 cents.

4. Female Weakness "Cures"

Deals with mail order concerns that "specialize" in "women's diseases," and widely-advertised nostrums sold for "female weakness." Illustrated. 35 cents.

5. Cosmetics—Allied Preparations

This pamphlet deals with preparations for the skin; for the hair; "hair removers," deodorants, etc.; and includes special articles on hair dyes, "hair tonics" and "complexion clays." Illustrated. 15 cents.

6. Deafness "Cures"—"Treatments"

In this pamphlet several widely-advertised concerns and products are exposed. Illustrated. 15 cents.

7. Mechanical Nostrums

Deals with "electric bells," the "electro-chemical ring," several "rupture cures," and the various "gas-pipe" cures, etc. Illustrated. 15 cents.

8. Miscellaneous Specialists

Some self-styled specialists, itinerant and otherwise, form the subject matter of this pamphlet. Illustrated. 20 cents.

9. Kidney Disease and Diabetes

Nostrums sold for the alleged cure of diabetes are grouped and discussed with those sold for Bright's disease. Illustrated. 15 cents.

10. Consumption "Cures," etc.

Discusses preparations sold for the alleged cure of tuberculosis, as well as a number of so-called cough remedies. Illustrated. 15 cents.

11. Epilepsy "Cures"—"Treatments"

Practically all of the "cures" are preparations of bromides or phenobarbital. Names and describes many preparations in this group. Illustrated. 15 cents.

12. Mineral Waters

Mineral waters, as well as patent medicines, may be sold under deceptive claims. A number of such products are described. Illustrated. 10 cents.

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Nos. 1—2—3—4—5—6—7—8—9—10—11—12

NAME.....

ADDRESS.....

dirty milk, dirty bottles, dirty nipples, flies and the mothers' general lack of knowledge about how to protect and to feed their babies. Today, except in certain areas, the principal cause of death among babies is premature birth, and next come colds and infections that are acquired through the breathing apparatus. Both of these causes can be attacked, and our radio program will endeavor to show how.

Because there are still a few localities and a few mothers in all localities without knowledge of how to protect babies against "summer complaint" and intestinal upsets, the program will include features dealing with the feeding of infants. It will also emphasize the routine care of the healthy baby during an average day.

May 24: Between infancy and the school years is that time of life called the preschool age. This is an artificial division, since there is no sharp line of differentiation between the infant at 11 months and the same infant at 13 months, or the toddler one month before his fifth birthday and the same toddler one month after. The division came about because at the age of 1 year most babies have learned to walk, and from that time on they become more or less independent, especially if younger babies arrive to absorb the mother's attention. The preschool age ends more abruptly than it begins, for the entry into school work and responsibilities creates a sharp change in the environment of the child.

During preschool age there seem to be few health problems, and yet experience has shown that children who were perfectly healthy in infancy frequently begin their school experience with decayed teeth, inflamed tonsils, enlarged adenoids, underweight, poor eyesight, defective hearing and sometimes more serious conditions. Also, in many instances, they arrive at school without immunity against smallpox, diphtheria or whooping cough, all of which should have been provided in anticipation of possible exposure.

Recognizing these facts, the National Congress of Parents and Teachers established in 1925 its "Summer Round-Up of the Children," a project intended to deliver children to the school systems in fit physical condition and fully immunized against preventable contagious disease.

The program will deal with the needs of the preschool child and what the summer round-up idea can aid in the solution of these needs.

In some sections of the country April 30 marks a change in time. Check with your local newspapers on Wednesday of that week for any change in time of these broadcasts.

PLEASE TELL US!

Teachers, principals and nurses engaged in health education who read this paragraph are requested to write HYGEIA, stating whether they desire the continuance of this radio program, whether they desire to have it continued as a school health program primarily and, if so, why.

Such broadcasts as these are costly and time consuming. We must be sure that they are serving a genuine need and serving it effectively.

And may we know what you like about "Your Health" and especially what you don't like?

JUDITH STARTS SOMETHING

(Continued from page 429)

"Uh!" Old Sock was thinking on a new idea apparently. "What? Oh, I don't know."

"Where do they get that gland extract?"

"You know as well as I do that most gland extracts come from the cows, swine and sheep."

"Maybe it would work better for whiskers if it were made from pituitary glands from bearded billy goats!"

"Go soak your head!" exploded Old Sock disgustedly.

The cross examination was over, because he refused to be quizzed any longer. For a boy with a lot of curiosity, he was badly muddled in the mind. He resented that almost any fool can ask more questions than a wise man can answer. I did not blame him, for why should all skin appendages be so closely related chemically and serve such different purposes and yet look so entirely dissimilar? Why should a man's beard be dependent on the function of glands he knew nothing about.

He knew well enough that a man's beard began to grow after puberty, and the pituitary gland alone was not the whole story about bald heads. Women had pituitary glands too! So, too, did they have adrenal glands, which had been the subject of one of the pictures of bearded girls he had seen in his father's textbooks. One in particular he remembered well because there had also been a picture of a tumor which the author said caused the increased hairiness of the girl. Virilism, the condition had been called, and meant, of course, having the whiskered appearance of a man.

Maybe there was something wrong with his own adrenals? That was a horrible thought for a beardless stripling who had once been so susceptible to what he had read about "poisonous diet combinations" that he had become slightly dyspeptic.

Old Sock did more library research, little realizing his fears about an imagined debility of his healthy adrenal glands had stimulated their function. That was why he was slightly trembly, his pulse a bit rapid and why he was unable to sleep well that night. But being the ardent student of himself that he was, he did speculate on the theory that his adrenals were disordered. *That* was why he had a scantier "beard" than Ted Thorndyke, a full year younger than himself! There was nothing Old Sock wanted more just then than to raise a crop of whiskers which would put Handle-Bar Hank's mustachios to shame.

And was Old Sock surprised when the Dumb Cluck's broodiness finally turned to a snooty air of accomplishment! Sock, and the rest of us, learned she had written three themes in English as a comic debate on, Resolved: When a Boy Approaches Manhood, He Should Be Allowed to Shave When Necessary.

So many people regard adolescence as the normal period of foolishness required of each person who "grows up," so she said, that it should be ignored as much as possible. Since Judith was in the same period of life, she had some ideas of her own on how such young people should be treated. She dodged her own problems by this malicious consideration of Old Sock's whiskers. Her first theme was on the affirmative side of the debate and concerned itself with the immaturity of boys about to approach this problem of personal appearance, neatness of hirsuties and the psychologic responsibilities a youth unwittingly assumes when he shaves for the first time. Why, her argument ran, should these boys be forced to perform this act of manhood secretly, as if it were morally wrong and a crime?

The second theme was where the budding psychologist exposed the old-fashioned views of unthinking adults. It was so serious that it comically exposed its own psychologic fallacies. Boys will be boys, it stated, until they are really men. Mere shaving of juvenile fuzz off lips never put a mature idea in their rattle brains. Furthermore, they were only aping their betters, and it was a waste of time and father's razor. For that they should be ashamed and quit trying to be somebody they were not. Besides, age, not shaving, was what put beards on boys. The practice of secret shaving was hypocrisy, and it should be sternly prohibited and suppressed.

The third theme was witty pro and con comments of the imaginary judges, "prominent citizens," public characters, club resolutions and newspaper comments.

Aside from their amusing aspects, these themes showed that the Dumb Cluck had not let the world whiz past without a social interest. The entire serial hammered home her message that when adolescents show new signs of bodily and mental maturity, they should not be kidded about them. Indeed, they should be casually but seriously accepted by adults. If information and aid were desirable, the adolescent should have them when needed.

And what came of this in the Answith family? Judith had a secret session with her father and mother and was highly praised for her methods and unusual understanding.

Then Old Sock was privately referred to a certain article on shaving in *The Journal* of the American Medical Association. "Read it," Dr. Answith said, "because you might as well learn the theory along with the practice. It's a nice thing for us men to have comfortable and clean shaves." He emphasized the "us" a trifle. "By the way, I've noticed that my razor hasn't been so good lately. Maybe you had better go down and get one that suits you."

"Certainly, Dad!"

Old Sock was pleased to hear the insinuation that his beard was capable of dulling a razor.

Medical News

OF THE MONTH

Isolate Pneumonia Patients!

Isolation of all cases of pneumococcic pneumonia is advocated by Julien E. Benjamin, M.D., James M. Ruegsegger, M.D., and Fanny A. Senior, Cincinnati, in their article, "Cross Infection in Pneumococcic Pneumonia," in a recent issue of *The Journal* of the American Medical Association.

Although the disease has long been classed as contagious, the authors say, it rarely is reportable. The general failure to segregate or isolate patients with pneumonia implies that its contagiousness has been underestimated.

"It is essential that each patient be segregated in a cubicle and not treated in the open ward," the authors maintain. "Physicians and nurses should be required to observe the same precautions in caring for such patients as are usual in contagious disease wards.

"The wearing of gowns and masks and the washing of hands after each examination or treatment should be strictly enforced. Visitors should likewise be protected. Since these regulations have been adopted at the Cincinnati General Hospital, we have been convinced of their merits."

Medical Unity

On March 1, 1939, the official membership of the American Medical Association totaled 112,210, of whom 69,416 were Fellows. This contrasts with 98,041 members in 1934 and is the largest in the organization's history.

Dr. Olin West, Secretary of the Association, says: "The figures here presented would seem to refute definitely statements emanating from various sources during these five years designed to indicate that there has been great disaffection in the ranks of the physicians of the United States and great diminution in the support of the profession generally for the established policies of the American Medical Association."

Cultists in West Virginia

A measure designed to curb the attempts of cultists to pass themselves off as regular physicians was recently enacted by the West Virginia legislature.

Sponsored by the State Medical Association, the law requires that any person using the prefix "Doctor" or "Dr." in connection with his name in any letter, business card, advertisement, sign or public display of any nature whatever, must affix "suitable words or letters designating the degree which he holds."

This law becomes effective June 6, 1939.

Pregnancy

Women who have not had a pregnancy for ten years or more should receive the best prenatal care and should be delivered in a hospital under expert obstetric supervision, *The Journal* of the American Medical Association declared in an editorial recently.

Relieving Fungous Infections

Copper passed through the skin by means of electric current proved effective in relieving fungous infections of the hands and feet in a majority of a group of patients so treated by Howard W. Haggard, M.D., Maurice J. Strauss, M.D., and Leon A. Greenberg, Ph.D., New Haven, Conn., they state in a preliminary report in a recent issue of *The Journal* of the American Medical Association.

Because the fungi in such infections are in the deep layers of the skin, most fungicides applied to the skin do not reach them and are thus not entirely successful as remedies, the authors point out.

"The ideal method of treating such infections," they say, "would be the introduction of a fungicide into the skin without injury to the skin. This we have attempted to do by passing copper, which is highly fungicidal, through the skin by iontophoresis [introduction of a substance by electric current]."

Inheritance of Rheumatism

The relationship of rheumatic manifestations in parents to those in children is discussed in a recent number of the *Journal of Clinical Investigation.*

From their study of the families of ninety-six rheumatic children and a control group of normal children, Ross L. Gauld, M.D., Antonio Ciocco, Sc.D., and Frances E. M. Read, M.D., Baltimore, found that the percentage of those whose parents had a rheumatic history was 3.7 times as high among rheumatic children as among normal children.

New Health Problem

Because of the increasing use of rapid transportation, especially the airplane, animal parasites seldom seen now in this country may be encountered more frequently in the future.

Such transportation, E. R. Mugrage, M.D., Denver, points out in a recent issue of the *Rocky Mountain Medical Journal,* increases the possibility that the incubation period for the development of a parasite will extend beyond the time of arrival of the host at his destination. Thus symptoms may develop which cannot be successfully diagnosed unless this possibility is considered.

Any person coming from a country in which animal parasites are prevalent is potentially a carrier. Animals, birds, airplanes, automobiles, ships and even baggage may carry the parasites. The importance of this problem is recognized by the U. S. Public Health Service, which requires inspection for such infestation of all persons and airplanes on commercial airlines arriving in the United States from foreign countries.

Night Driving

Teaching the technic of night driving as a part of the initial training of motorists is advocated by *The Journal* of the American Medical Association. In a recent editorial on the various aspects of motor accidents at night, *The Journal* pointed out that most motorists obtain their driving experience and training under daylight conditions; whereas night driving involves a different technic from day driving because of the difference in visibility and in the reactions of the drivers.